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A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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Manufacturers' Record.

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BALTIMORE, DECEMBER 8, 1904.

TO BE DISREGARDED.

The Manufacturers' Record suggests that the substantial interests of the country, North, South, East and West, can little afford to give serious heed to the suggestion of Col. George B. M. Harvey or of anyone else that the South undertake to lead in the rehabilitation of any political party. The to-be-expected effect of a similar suggestion made more than a year ago through one of Colonel Harvey's periodicals is recorded in the recent election. One lesson ought to suffice common sense.

THE SEABOARD IN BIRMINGHAM

The completion of the Seaboard Air Line extension from Atlanta to Birmingham is the most important accomplishment of railroad construction in the South for a long time. Moreover, this latest piece of work is finished at a time which will make its existence felt as of the greatest influence, inasmuch as the greater development of the vast natural riches in the Alabama mineral region is now under way, and the manufacturing industries of the Birmingham district and adjacent centers are entering upon a period that will be marked by enlarging outputs and by expanding markets for their products.

About two years ago the Seaboard Air Line acquired the East & West Railroad of Alabama, with termini at Cartersville, Ga., and Pell City, Ala., and announced its determination to build the anticipated extension from Atlanta to Birmingham. The construction of this valuable piece of railroad was quickly begun, the plans demanding very expensive reconstruction and revision of the East & West Railroad's line and also the building of additions to reach Atlanta and Birmingham, respectively. The first of these links to be completed was that from Rockmart, Ga., to Atlanta, 47 miles. The other, from Coal City, Ala., to Birmingham, 38 miles, has just been finished, permitting the establishment of freight-train service on Monday of this week. According to reports, passenger trains will not yet be run over the entire line, the newly-completed portion being now too rough for

comfortable riding and high speed, but it is said that in about a month it is expected the track will be sufficiently settled and surfaced to permit the establishment of passenger service.

With the completion of the Atlanta & Birmingham Air Line, that being the name of this extension, the Seaboard system becomes possessed of a modern railway leading to the great industrial center of Alabama, a line 166 miles long, with low grades and easy curves, characteristics which will insure heavy trainloads and consequent economy in operating, as well as speed and comfort for passengers. In addition to reaching Birmingham, it has a branch to Cartersville, Ga., 23 miles long, and in Alabama a branch of four miles to Jacksonville, and another of eight miles to Pell City. Probably other branches to more important points will be constructed to meet demands.

This new route to Birmingham, while enabling the Seaboard to get a share of the traffic going out of that city, also assures the system of valuable and far-reaching western connections via the St. Louis & San Francisco Railroad, which for several years has had a line into the great industrial center of Alabama. But however extensive may be the possibilities of this western outlet, the part to be taken by the Seaboard extension in the immediate future will be in the mineral and timber development of a country which its trains will now enter for the first time. Among the products of the mines and forests which will be handled in large quantity over this road from points along its line are iron ore, coal, slate, lime, redwood, pine, etc. The road penetrates the Coosa coal fields and the Cahaba iron-ore territory. Several mines at Pell City will, it is said, be immediately enlarged as a result of the completion of the line. There will also, according to other reports, be enlargements of iron furnaces, now that additional transportation facilities are provided for handling their output. The line touches more than 30 towns and villages, and has stations at other points which promise to develop into settlements in consequence of the industrial activity inspired by the opening of railroad communication.

It has cost the Seaboard system, according to report, from \$9,000,000 to \$10,000,000 to provide this extension, the expenditures at Birmingham amounting to about \$1,000,000 for terminals. The line is marked by frequent passing tracks, there being one every five miles. Each of these sidings is half a mile long, and the provision of such a number of them will make the operating capacity of the line very large, as numerous heavy trains can be moved over it with such facilities in the way of frequent passing points. The forethought thus displayed makes apparent the expectations of vast tonnage to be carried over the Seaboard lines from Birmingham to tidewater on the Atlantic coast, as well as to Eastern and Northern points.

THE BEST SOUTHERN PATRIOTISM.

SHELBY IRON COMPANY.

T. G. BUSH, President.

Birmingham, Ala., December 1, 1904.

Manufacturers' Record Publishing Co., Baltimore, Md.:

Gentlemen—It has occurred to me that this company could not do a better thing towards contributing to the general upbuilding of the South, by helping to attract the world's attention to this section, than by making a Christmas present of a year's subscription to the Manufacturers' Record to a number of its customers and correspondents throughout the North and West. I am, therefore, enclosing a list of 15 names to whom you will please send the Manufacturers' Record for one year, and render your bill for \$60 to this company. Kindly notify these people that the paper is sent as a Christmas present by the Shelby Iron Company.

I cannot conceive that there is any business man in the South—banker, manufacturer or merchant—who can afford not to be a subscriber to your paper. Certainly any Southern man who does not read it regularly is losing a great opportunity to keep in touch with the South, and he misses thereby a weekly inspiration which has been the mightiest factor in Southern upbuilding. To the Northern and Western man the Manufacturers' Record, it seems to me, is of equal interest as the exponent of the material interests of this, the coming center of the world's business activity. Moreover, I feel that if every business concern in the South would send as a Christmas present a few annual subscriptions to their correspondents North and West they will make a wise investment which would be a powerful stimulus in broadening the great work of the Manufacturers' Record in awakening the world's interest in the resources and attractions of this section. I wish every bank and every other business institution in the South would send you at least a few subscriptions to some Northern and Western friends as a Christmas gift to them. Many of them could well afford to send 50 or 100, and find it the best work they ever did for the South's prosperity and their own individual profit.

Very truly yours,

SHELBY IRON COMPANY.

T. G. BUSH, President.

Reader, how patriotic are you in your desire for the upbuilding of the South? Are you willing to join such a movement so strongly presented by President Bush and send to your friends as a Christmas gift a year's subscription to the Manufacturers' Record? Every copy is a drummer for Southern prosperity and Southern right-thinking and for making known to the world the possibilities of this section. The Manufacturers' Record will be glad to receive your order for one or for many subscriptions to be sent as Christmas gifts to your friends, and will send to each a special receipt giving the name of the sender.

TO ADVANCE SOUTHERN CITIES.

Business men of St. Louis, anxious that their city shall reap the full benefits of what they have already done through the exposition just closed, are planning for the organization of what they would call the "Million Club," with the general object of bringing the population of St. Louis up to 1,000,000 and advancing proportionately its industrial and commercial interests. The Board of Trade of Little Rock, Ark., has begun to hold stated meetings for the furtherance of a spirit that will insist that all enterprises, such as railroad extension, hotel-building, sewer construction, electric-railway building, lighting and heating, shall be undertaken upon a scale that will allow for the growth of the city's population to 100,000 within the next few years. Mr. Fred Muller, secretary and treasurer of the Board of Trade of New Orleans, has sketched a plan, somewhat similar to that of the Commercial Club of Birmingham, Ala., to establish a guarantee fund to encourage the establishment of factories in the city. Another suggestion on the same line is the formation of a \$5,000,000

corporation, in which all the city's important interests shall be represented, to furnish financial co-operation and moral support by investing in stocks and bonds of manufacturing companies desiring to locate there. Upon some such lines the Progressive Union of New Orleans has been agitating for two or three years, and Texas cities, such as Houston, Dallas, Beaumont and Galveston, are considering similar propositions. These are manifestations of a very healthy frame of mind promising, with persistence, to advance a number of important Southern communities.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 58 and 59.

Beacham & Shackleton of Jacksonville, Fla., dealers in timber lands, write to the Manufacturers' Record:

We have received a number of replies through your paper, and are very much pleased at the outlook for results from the advertisement.

RAILROAD EARNINGS IN THE SOUTH.

A study of the reports of 15 leading railroads in the South, including four whose mileage does not lie altogether in this section of the country, although a very large part of it classes as Southern, displays the gratifying fact that the earnings of these roads are increasing as the season advances. All the lines to which reference is made have issued their statements up to and including September, and in nearly every instance each company shows for that month an increase of much greater percentage than its average for the three months since July 1, when the fiscal year of all but one of the lines began. Some of the gains are remarkably large, due partly to enlarged business and receipts and partly to the completion of the improvements under way last year which were charged to operating expenses. In calculating the percentages of growth comparison is made with the corresponding month and period of last year.

A detailed review of the reports, first of the period of three months and then of the month of September, presents clearly the ratio of progress which railroads in the South are now enjoying, for the reports of the lines here considered are typical, as will be seen by the names of the several companies.

For the period of three months from July 1 to September 30 the changes shown are as follows: Southern Railway, gross 7.42 per cent. increase, net 7.12 per cent. increase; Atlantic Coast Line, gross 8.12 per cent. increase, net 7.38 per cent. increase; Seaboard Air Line, gross 6.67 per cent. increase, net 23.79 per cent. increase; Norfolk & Western, gross .5 of 1 per cent. increase, net .75 of 1 per cent. decrease; Chesapeake & Ohio, gross 8.80 per cent. increase, net 16.68 per cent. increase; Louisville & Nashville, gross 1.17 per cent. increase, net 15.16 per cent. increase; Nashville, Chattanooga & St. Louis, gross 3.25 per cent. increase, net 6.29 per cent. increase; Mobile & Ohio, gross 5.78 per cent. increase, net 9.24 per cent. increase; Illinois Central, gross 4.77 per cent. increase, net 49.62 per cent. increase; Yazoo & Mississippi Valley, gross 6.01 per cent. increase, net 130 per cent. increase; Rock Island system, gross 13.28 per cent. decrease, net 14.22 per cent. decrease; St. Louis & San Francisco, gross 4.92 per cent. increase, net 13.16 per cent. increase; Missouri Pacific, gross .66 of 1 per cent. decrease, net 4.33 per cent. decrease; Missouri, Kansas & Texas, gross 10.33 per cent. increase, net 38.38 per cent. increase; St. Louis Southwestern, gross 18.46 per cent. increase, net 42.51 per cent. increase.

For the month of September the changes shown are as follows: Southern Railway, gross 10.96 per cent. increase, net 13.23 per cent. increase; Atlantic Coast Line, gross 12.79 per cent. increase, net 23.32 per cent. increase; Seaboard Air Line, gross 13.11 per cent. increase, net 40.37 per cent. increase; Norfolk & Western, gross 6.84 per cent. increase, net 7.64 per cent. increase; Chesapeake & Ohio, gross 9.29 per cent. increase, net 25.28 per cent. increase; Louisville & Nashville, gross 4.21 per cent. increase, net 15.53 per cent. increase; Nashville, Chattanooga & St. Louis, gross 3.09 per cent. increase, net 2.67 per cent. increase; Mobile & Ohio, gross 10.33 per cent. increase, net 6.07 per cent. increase; Illinois Central, gross 8.41 per cent. increase, net 56.34 per cent. increase; Yazoo & Mississippi Valley, gross 10.56 per cent. increase,

net 213 per cent. increase; Rock Island system, gross 6.21 per cent. decrease, net 15.32 per cent. increase; St. Louis & San Francisco, gross 10.76 per cent. increase, net 33.92 per cent. increase; Missouri Pacific, gross 2.71 per cent. increase, net 7.04 per cent. increase; Missouri, Kansas & Texas, gross 18.56 per cent. increase, net 50.80 per cent. increase; St. Louis Southwestern, gross 17.98 per cent. increase, net 81.84 per cent. increase.

It will be observed that during the period of three months there are five decreases shown—two in gross and three in net earnings—but that in September only one decrease appears, and that in gross earnings upon a system which has a large part of its mileage wholly out of the South. Moreover, the net earnings upon this particular group of roads displays a large gain as compared with the same month of last year.

That there is no abatement in the progress of the railroads in the South is proven by the reports for October which are now being made public. Several of them have appeared and show an increase of 6.36 per cent. in gross earnings and of 9.25 per cent. in net earnings as compared with October of 1903. The outlook is for a continuance of this admirable record.

DEFINITE FACTS FOR IMMIGRANTS.

One of the drawbacks upon immigration to the South has been the lack of information added to a vast amount of misinformation about that section. This difficulty, to be sure, is being rapidly overcome under the impulse of individuals and organizations that have for years labored to attract men and money to the South. The beneficial movement will be speeded if the example of Mr. D. A. Tompkins of Charlotte, N. C., is followed by other progressive and wide-awake business men. He is ever alert to avail himself of every opportunity to advance his part of the country, and one of the best things he has ever done in that direction is the publication of a little pamphlet, which is reproduced in full on another page of this issue of the Manufacturers' Record, in which are set forth definite facts of the kind desired by men seeking homes and profitable employment. Written in Charlotte, the pamphlet naturally is occupied with facts about the opportunities in the cotton-mill industry. These come most opportunely. Only a short time ago Col. James L. Orr, president of the Piedmont (S. C.) Mills, was commenting upon the scarcity of mill labor in the upper part of South Carolina. He said that so many families had gone to the farms on account of the high price of cotton that it had been impossible to run all the machinery of the mills to its full capacity. He discussed the relative earning capacity of families on the farms and in the mills, and suggested that an effort should be made to bring operatives from the mountains of North Carolina, Tennessee and Virginia. He said that the railroads could be of great service in bringing in settlers. About the same time a canvass of a group of mill men at Charlotte led to a statement by the Evening Chronicle that each of the mill men was in a position to employ from 5 to 30 families and give houses for immediate occupancy, and that if the railroads would send agents through the cotton-mill district they would probably get contracts for from 300 to 500 families. While mill presidents were sending their agents to the mountains for help and

seeking in other ways to solve a problem which becomes more or less acute whenever cotton brings high prices, a party of German and Polish immigrants arrived at Greenville, S. C., and sought work in the mills. The results of their arrival will be watched with interest, as satisfaction for all parties concerned would probably bring about a better migration and tend to simplify the industrial and agricultural situation.

In the meantime it would be well for business men in every community desiring thrifty settlers to assemble and publish such facts as those presented by Mr. Tompkins.

NOT A MATTER FOR RED TAPE.

Reproducing a recent editorial in the Manufacturers' Record presenting a list of commercial associations, public institutions, companies and individuals of influence that have joined in inviting foreign spinners to visit the South, the Manchester Guardian, referring to the probability that the New England Cotton Manufacturers' Association and the American Cotton Manufacturers' Association may not endorse the invitation, says:

The question arises whether the English Employers' Federation should not now consider, and definitely accept or reject, the invitation as it stands. We may perhaps point out that none of the large cotton-spinners' associations in America is exactly analogous to our own Employers' Federation. Their organization is a good deal looser and their activities are mainly concerned with their annual or semiannual gatherings, which are largely of a social character. The New England Association, representing as it does mainly the Northern mills, may hardly feel justified in asking the cotton manufacturers of Europe to visit the Southern mills and cotton fields. And the Southern manufacturers themselves are not fully organized. The American Cotton Manufacturers' Association at Charlotte, N. C. (formerly known as the Southern Cotton-Spinners' Association), does not by any means represent all the Southern mills, but it and the Georgia Industrial Association, which represents 140 mills in Georgia, are the only mill organizations in the South. The Georgia Association has, we believe, sent a very cordial invitation to the Employers' Federation here, and it is for the trade to consider whether that invitation, backed as it has been by chambers of commerce, municipalities, cotton exchanges and traders throughout the South, is not worthy of courteous and grateful consideration. It would be a pity if the scheme collapsed and misunderstandings were created through any undue regard for red tape and sealing-wax.

The Manchester Guardian also summarizes expressions of Mr. C. W. Macara, president of the Federation of Master Cotton Spinners' Associations, to the effect that he proposes to lay the matter before the Federation and before the Committee of the International Congress at its next meeting in Brussels. He intimated that the individuals interested in the international movement, representative of the cotton-manufacturing interests, are very reluctant to do anything that might in any way prevent the two associations in America specially named from coming into the international organization. He added, however, that it would have to be considered whether the invitation did not come from people who were more concerned about the supply of the raw material than the using of it.

Here in a nutshell is an explanation of the temporary check given to the movement backed by practically every representative interest in the South—cotton manufacturers as well as cotton-growers, merchants as well as farmers, bankers and railroad men, boards of trade and chambers of commerce. All of these recognize the importance of cotton and desire that nothing shall be left undone for the realization of the potentialities of the South in that re-

spect. They feel that the visit of English spinners would be of benefit both to the South and to the foreigners, regardless of immediate ambitions of any class connected with cotton either in the growing, the marketing or the manufacturing, and likewise regardless of petty fears that prevent one from seeing beyond his garden fence. The prospect is, indeed, too fair to be marred by regard for red tape and sealing wax, especially as the Englishmen are beginning to understand that the red tape stands for so little in comparison with the breadth of the movement on this side of the water.

A REBUKE TO IMPERTINENCE.

The Rev. A. J. McKelway, Assistant Secretary of a New York organization which calls itself the "National Child Labor Committee," has written to Governor Heyward of South Carolina recalling the fact that he had met him at Spartanburg and announcing that Senator Tillman and Mr. Gonzales have both expressed themselves as in favor of a legislative amendment to child-labor legislation. He says that personal investigation and facts derived from others convince him that the "present law, which is practically uniform in Virginia, North and South Carolina, is very ineffective as it now stands." The Rev. Mr. McKelway seems to have changed his opinion since he has taken employment with the "National Child Labor Committee," for he was responsible for the statement published April 19, 1904, describing the situation as "the successful campaign against child labor in the cotton mills." Be that as it may, and granting the possibility of a mistake by the linotype machine, a novel factor just introduced into the campaign in Southern sociology, it may be noted that the Rev. A. J. McKelway's offer to co-operate with Governor Heyward in the local affairs of South Carolina has been given the proper reception in the columns of the Charleston News and Courier and the Greenville News. The Columbia correspondent of the first-named paper, referring to the Rev. A. J. McKelway's letter, says:

The cotton-mill interests did not want any legislation or interference, but when the law went on the books they gave their cooperation to the fullest extent. This interference is unexpected and will hardly amount to anything much in this State except to show that some folks will not let well enough alone and constantly try to keep up agitation. * * * The present law, at the time of its enactment, was entirely satisfactory to those who fought and worked so hard for the child-labor legislation.

The Greenville News hits out a little more forcibly. It says:

If there is anything wrong with the law regulating the employment of children in the cotton mills the people of South Carolina ought to be able to adjust it without accepting the advice or suggestion of outside associations which are unfriendly. These foreign bodies have doubtless believed that a system of slavery was in operation in this State, * * * but if they will take the trouble to investigate conditions they will doubtless find that this is not a slave-dealing Commonwealth. Of late years the law has been so changed and amended that it is more satisfactory to the harping critics and the situation in the mill villages is ideal. The operatives have no complaints, and it is not the aim or desire of the manufacturers to take babies from the cradle for the spinning-room. Excellent schools have been established and the children are sent there instead of being sent to the mills. It is not right, of course, to ruin young lives by excessive labor, and that is not the purpose of the men who have done so much to stimulate the textile industry. South Carolina can easily handle its own problems, and no attention should be paid to the screed and tirade of persons who are not our friends.

It may be recalled that the Columbia State at the time the South Carolina

child-labor bill became a law intimated that if its regulations should not be strictly observed, a more radical statute would be enacted, "one that would give the mills something about which to be truly concerned." At the same time it said that the contest over the law had ended satisfactorily and amicably, "the vote being no more than the ratification of the wishes of the people heretofore expressed," and it described the law as one of the many monuments raised by the life of one who had spoken "clearest and loudest for this reform" and "his last and noblest work." It may be suggested, in addition to the rebuke of the Greenville News to imperitance, that the Columbia State has already hastened to announce that "Dr. A. J. McKelway, assistant secretary of the National Child Labor Association, is mistaken about the attitude of The State when he says in his letter to Governor Heyward, in advocacy of raising the age limit for child labor from 12 to 14 years under certain conditions, that 'Senator Tillman and Mr. Gonzales both expressed themselves as in favor of this legislative enactment,' and it may be further suggested that South Carolina, as well as other States, should remember that if the agitation is not kept up, there would be no excuse for giving individuals employment in it. Sociologists must give some reason for their existence. How long must it take for generous-hearted Southerners to refuse to countenance the professional sociologists? How long will they permit their zeal and enthusiasm to outrun prudence and knowledge?"

SUGAR-COATED BLAIRISM.

At the last meeting of the Conference for Education in the South, a feature of the Ogden Movement, the president, Mr. Robert C. Ogden, was credited with the suggestion that the organization ought to have the franking privilege in the mails, and that the matter should be taken up with Congress. This was not surprising in view of the rather short-lived career of the organization's organs, in spite of application for entry as second-class matter at the Knoxville postoffice. But it was none the less absurd. Now a similar proposition appears in an effort on the part of State School Commissioner William B. Merritt of Georgia to secure action by Congress that will give the State departments of education the privilege of sending free through the mails bulletins, reports, circular-letters and other educational matter to the schools and school officials of their respective States. In the course of a letter to the representatives of Georgia in Congress Commissioner Merritt says:

About 15 years ago the Blair bill was introduced into Congress providing that the large surplus then in the treasury of the United States should be distributed among the States, to be applied to the improvement of our common schools. I believe the bill provided a very liberal part of the appropriation for those States having a large percentage of illiterates. Although a large part of this proposed appropriation would have come to the Southern States, a majority of our national legislators, including mostly the Southern congressmen, very wisely, I think, opposed the Blair bill.

There is now an organized movement to secure federal aid for the common schools of the United States. I doubt the wisdom of this movement, but I feel sure that the United States government can do much, at a very little cost, toward the building up of our common-school systems in each State, enabling the State educational departments to send out to schools and school officials bulletins, reports, etc., free of postage. The saving of the expense of transportation of such matter through the mails will amount to a considerable sum during the year, and the more thorough and larger distribution of educational matter will have a most

wholesome and stimulating effect on the educational work in our rural districts.

It is hoped that no congressman in any part of the country, having regard for the self-respect and self-reliance of his people, will pay any attention to that proposition. It is but sugar-coated Blairism, as Commissioner Merritt will doubtless perceive if he studies it in all its bearings. "Educational" literature that cannot circulate and pay its way through the mails on its own merits is not worth circulating, and deserves the fate of Ogdenism's literature.

Direct connection may not be traced, perhaps, but Commissioner Merritt's proposition is essentially that of Mr. Ogden, approaching the main point from another direction in line with Ogdenism practices. The movement for revival of Blairism in education was clearly revealed in the Manufacturers' Record more than a year ago, and it is by no means improbable that the plan of federal aid, especially for education in the South, a plan menacing the power of initiative and the spirit of independence of all the people of the United States, is to be shortly advanced as a sop to the South in yielding its convictions and judgment upon social questions affecting the safety of the whole country. Public opinion favorable to the plan has been adroitly cultivated under the auspices of Ogdenism, and much of the so-called "educational literature" now being circulated bears directly and indirectly upon it.

Instead of seeking to circulate free through the mails bulletins, reports, etc., largely dealing with fads, which are becoming an ever-increasing burden upon taxpayers, "educational officials" had better devote their time and energies to the encouragement of teaching school and of folks depending upon themselves for their own advancement. Training in that direction is the education needed all over the country, but it is the education directly contrary to the education promoted by Ogdenism.

For Immigration.

The Atlanta Constitution, in editorially reviewing an article contributed to that paper by the editor of the Manufacturers' Record and touching on that portion of the article which bears on immigration, says:

"He next strikes the keynote of the doctrine the Constitution, in concert with other Southern papers, has been stressing in connection with the South's imminent opportunity:

"Never before has there been an opportunity when all things were ripe for satisfactory results from immigration work. The whole business world is studying cotton as never before, and this, in connection with the prosperity of the South, makes an ideal situation for concentrating the energies, the population and the wealth of the world upon the general development of the South."

"That paragraph should be cut out and pasted on the desk flap of every ambitious business man in the South!"

"The entire article is a compelling call to action. Those portions quoted and commented upon herein are so vital and unanswerable that they stand out with peculiar sharpness. If the South is to forestall any invasions of her tacit monopoly which, in its magnitude fairly thrusts itself on our attention, now is the time to apply all the intelligence, initiative and discretion existent in the Southern nature."

It is announced that Minnesota parties represented by Mr. C. E. Williams will build a modern flour mill at New Orleans in time to handle the next wheat crop.

PROSPERITY IN THE COTTON BELT.

Bankers of the cotton belt present in this week's issue of the Manufacturers' Record many evidences of prosperity in their section. Under date of November 28 they were asked for views on the financial condition of farmers and business men, the outlook for trade, the prospects for increase in manufacturing interests, the condition of banking interests, immigration and the general spirit of the people as to the upbuilding of their community. Coming from different States, the replies indicate a degree of comfort and general prosperity unknown in the South in many years. The situation in Alabama is quite typical. Farmers there are in better financial condition than they have ever been, having made large crops this season and now selling their cotton at a fair average price. As a rule, they are getting out of debt and becoming independent financially. It is significant that, in addition to the fair cotton crop, they made a large corn crop this year. So in Georgia there are reports of full average crops, both of cotton and corn, and of plenty in the way of provisions, in addition to the staple, while in Tennessee corn and hay crops have been good. The overproduction of rice in Louisiana has been counterbalanced by a healthy condition of the lumber market, and in Florida cattle business with Cuba and the raising of early vegetables and fruits have helped the farmers mightily. Improvement in farming conditions has been accompanied by advances in the price of farm lands during the past two years from 25 to 50 per cent., in some parts of Georgia, for instance, and from 50 to 100 per cent. in other parts, and by more than 100 per cent. in Alabama. Mortgages have been cancelled. Diversification in crops is becoming more general, farmers of Arkansas now marketing fruit and vegetable crops to the value of from \$50 to \$100 an acre, where 10 years ago they realized only \$15 to \$20, and Fort Smith being one of the largest original shipping points for Irish potatoes in the United States. The many substantial improvements in the way of new buildings, first-class roads, etc., reflect the spirit of progress intensified by prosperity. The letters follow:

Farmers of Alabama Better Financially Than Ever Before.

W. P. G. Harding, president First National Bank, Birmingham, Ala.: Our observation and information warrant beyond question the assertion that the farmers of Alabama are in better financial condition than they have ever been. They have made large crops this season and are selling their cotton at a fair average price. They made a large corn crop and a fair cotton crop last year and sold a large portion of their cotton at abnormally high prices, and as a rule the farmers are now out of debt and in a perfectly independent position financially. Farm lands are now selling in many cases at an advance of more than 100 per cent. on figures obtainable two years ago. The prosperity of the agricultural interests is fully reflected in general trade conditions, which, taken all in all, are the best we have ever known. The manufacturing and mining interests in the Birmingham district have been somewhat hampered since July by the coal-miners' strike which is still on. The companies affected by the strike, however, claim that labor conditions with them are rapidly becoming normal, and the marked advance in pig-iron and in iron and steel products since October 1 has acted as a powerful stimulus, and the feeling here is generally optimistic. The banking interests naturally reflect the general favorable conditions, and our financial institutions all report the largest

deposits in their history, carrying at the same time unusually strong reserves. The Seaboard Air Line Railway is now running its trains into Birmingham, and it is believed to be a question of a short time only when the Illinois Central will come in over the Frisco tracks. Construction has begun on the lower end of the Mobile & West Alabama Railway, which has Birmingham as an objective point. The pronounced success of the Tennessee Coal, Iron & Railroad Co.'s steel mill at Ensley, whose product is now admitted to be the best of its kind, is attracting great attention to this district, and our most conservative people express themselves without reservation that all indications are that this district is just entering upon an era of unprecedented development and prosperity.

Farmers Becoming Independent.

C. C. Chollar, cashier First National Bank, Arcadia, Fla.: The financial condition of farmers in De Soto county is excellent. They have good crops of oranges for which they have received high prices. Cattle business with Cuba the last season has been the best since the outbreak of the Spanish War. As a consequence of farmers being in good financial condition business in all lines has been good. The outlook for the coming year is good; farmers are raising more feed, so that it is not necessary to ship so much from the North. Through De Soto county truckers are preparing ground for large acreage of potatoes, beans, tomatoes and other vegetables for Northern market. This is a farming community, but there are excellent opportunities for canning factories. The banks of county show an increase of deposits and surplus over last year. The First National Bank of Arcadia was organized in 1900 with capital of \$30,000. It now has surplus \$24,000 earned, deposits average \$185,000, loans \$165,000. There are thousands of acres of good land for farming, trucking and cattle-raising at moderate prices. New settlers are welcomed. Many of our farmers are growing rich and independent from their cattle and oranges.

In General People in a Cheerful Mood

Wm. A. Guilmet, cashier Lake Charles National Bank, Lake Charles, La.: The financial condition of the farmers and business men did not turn out as promising as indications pointed some six months back, due to the overproduction of the rice crop, though this depreciation has been greatly counterbalanced by the splendid trade and healthy condition of the lumber market, which is the principal resource of Lake Charles. Our mills are all running on full time, and the splendid cotton crop and grain crop West have proven of incalculable good to this principal interest. The banking affairs of the town show an increase of a quarter of a million dollars in deposits over last year, which is self-convincing. There are at least 50 new residence buildings in the course of construction, and in general the people are in a cheerful mood.

With Their Faces to the Sunrise.

W. W. Murray, president Bank of Huntingdon, Huntingdon, Tenn.: In this section of country prosperity is in evidence in every department of business. The farmers were never so prosperous, certainly not within the past 40 years. The farmers owe less than ever before and have more surplus stock and money. The cotton crop is above an average, and, owing to exceptionally favorable weather, most of the cotton was picked and sold before the recent decline. Corn and hay crops are good. Merchants are having a good trade so far, with good prospect for

the remainder of the season. Everybody is employed who wants to work at remunerative wages. There is more money and stock in this county than at any other period in its history. There is more money on deposit in the banks of the county than ever before at this season of the year. One new bank has been organized this year in this city and is in successful operation. All the banks in the county are doing a good business. The great majority of our people have their faces to the sunrise. They believe in the expansion of all kinds of legitimate business; they believe in the great future of the Southern States; they want to see the Panama canal completed, which means so much for the whole country and for the Southern States in particular; they want to see all pessimists and croakers put out of business. The Manufacturers' Record is doing a great work for the Southern States and should be read by everybody.

Progress and Prosperity Traveling Hand in Hand.

W. J. Echols, president Merchants' National Bank, Fort Smith, Ark.: The development of this section of the country has probably been greater within the past five years than for the 25 years preceding 1900. In speaking of this section of the country I refer especially to Central Western Arkansas and Eastern Indian Territory. The staple product of agriculture is, of course, cotton, and in the growth of this article the section has been especially favored this year, and the yield will exceed by a large per cent. any crop heretofore produced. In view of this fact it is needless to state the condition of the farmers and merchants is better than in past years, and the outlook bright for increased trade and further development of agricultural lands. While this section of the country has long been considered especially adapted to cotton-growing, it is no less favorable for many other products, and this city has within the past few years come to be regarded as one of the largest original shipping points for white potatoes in the United States. It is the realization of the value of varied crops that has added so much to the assets of this section and the betterment of the condition of the farmers within the past few years. Ten years ago the farmers here thought but little of planting anything but cotton and corn for market products, on which articles \$15 to \$20 per acre is a good average profit, while now the same land produces in fruits and potatoes a yield which is marketed for from \$50 to \$100 per acre, and by high cultivation has been known to bring more than \$300 per acre. It is, however, a lamentable fact that the farmers of this section as a whole are not thrifty, and the favorable condition of many is due more to the nature of the soil and climate than to the nature of the man. Immigration of a good class of farmers is especially desirable for the country and is being too slowly realized, though there has been a decided improvement within the past few years. While the agricultural development has been great and the outlook for further improvement better than the country has ever known, the greatest increase in development of this section has been in coal-mining and building of railroads. This point alone in the past five years has secured four new lines of railroad, and the development of coal properties is proportionately greater. This city is primarily a jobbing and manufacturing center and supplies the territory adjacent to it in a radius of from 100 to 150 miles. The country within this radius is in better condition, the people more prosperous and progressive and the general advancement more marked than ever known. The factories are alive and busy, new ones are locating and many others

knocking for admission. The banks show increased deposits and active demands. The spirit of progressiveness is abroad, and with prosperity is traveling hand in hand.

Unprecedented Chances for Investment.

J. T. Thomas, cashier Grenada Bank, Grenada, Miss.: We are pleased to advise that our farmers and business men were never in better condition financially. Many of the former, we are sorry to state, are holding their entire crop of cotton and seem determined to persist in doing so until after the holidays. The trade, both commercial and financial, is not up to our expectations, due largely to the decrease in the price of cotton and to the fact, as before stated, of much of it being held by the producers. Manufacturing interests should increase for the reason that many of our people have surplus money, and the rates of interest on loans being quite low, will necessarily cause many to seek investments in stocks which promise a better return in the way of interest and dividends. Of course, our banking institutions are enjoying and participating in the general prosperity of our country; all of us have abnormal deposits and fair demands for money at a reasonable rate of interest. Our portfolios were never freer from bad or doubtful loans. While our lands are yielding from \$4 to \$10 per acre rent, yet they can be bought at prices ranging from \$10 to \$20 per acre, thus offering an unprecedented opportunity for investment.

Cancelled \$400,000 of Mortgages.

A. P. Coles, cashier Exchange Bank of Albany, Albany, Ga.: I consider the financial condition of the farmers and business man in this immediate section better than it has been for 20 years. The trade in this section is 25 to 30 per cent. better than it has been for years. The manufacturing interest in this section is only beginning to show an increase. Banking interests and deposits have increased 25 per cent. within the last 12 months. They are 200 per cent. better than they were 10 years ago. The general spirit of the people of this section is fully abreast with that of any section of the North or South. There has been a tremendous increase in farm-land values and there is an active trade in real estate at from 50 to 100 per cent. increase in values. There has been a great decrease in the amount of mortgages in this immediate section. Something like \$400,000 worth of mortgages have been cancelled within the last 12 months. With another good crop and high prices, the increase of value in farm lands has only just begun. Instead of having just a few rich men in our section, as heretofore, we have a great many well-to-do farmers and merchants. I know of no section in the South where trade has continued to increase as it has right here.

Hard to Meet a Man Not in Good Spirits.

T. E. Blanchard, president Fourth National Bank, Columbus, Ga.: My opinion is that the financial condition of the farmers and business men is better than at any time "since the war," and better, really, than I ever hoped for. This section made a short crop last year, but was helped out by the price of cotton. This year we have made a full average crop, both cotton and corn, and have been selling cotton freely. The price has been profitable, and the remarkably rapid gathering and selling has given us much more money than usual at this time of the year. The outlook for trade is good, but would be better but for the fact that a great deal of this season's crop has been used in settling up the shortage of last year. The manufacturing interest of this city

is large and growing, and so far as I can see, is prosperous, not making so much money, perhaps, as has been made, especially amongst the cotton mills, still I believe the year will wind up satisfactorily. The financial condition of the banking institutions are good and deposits show a satisfactory increase. Reviewing the situation as a whole, it affords me pleasure to say that it is rare to meet a man who is not in good spirits and hopeful for the future. The tide of immigration has not set this way, though the population of our city shows a steady and healthy growth.

Borrowers Have Become Depositors.

Frank Sheffield, vice-president Bank of Commerce, Americus, Ga.: Our farmers have just finished gathering the largest cotton crop ever grown in this county, which has mostly been sold as rapidly as could be brought to market. Debts have been cancelled, farms improved and bank deposit accounts opened by many who have heretofore been borrowers. Our merchants generally report good business, and the banks reflect the prosperity of our section by showing a gain of 33 to 40 per cent. increase of deposits over one year ago. As yet our people have done but little in manufacturing; have been waiting for outside capital to come in, but there are splendid opportunities here, and with the improved financial condition of this section I do not doubt that local capital will be soon attracted to this line of enterprise. I think the future is full of promise for this section.

Plenty in Provisions and Cotton.

Jacob Phinzy, president Georgia Railroad Bank, Augusta, Ga.: I consider the financial condition of the farmer and business man generally of this section better than for many years; in fact, I do not think there is any doubt but what the South is more prosperous today than at any time since the war between the States. Nearly every farmer seems to have plenty in the way of provisions and cotton. I believe the lands are in a better state of cultivation, improvements better and stock more plentiful and in better condition; in fact, everything pertaining to agricultural life is healthier and more active than at any time for many years. I cannot answer positively as to manufacturing interests, but from what information I can get this interest seems to be bright and the prospects for increased trade good. The banks are doing better than for a long time, and the deposits indicate an increase in the neighborhood of 25 per cent. There seems to be a wide and universal spirit on the part of the people to upbuild this section of the country and to better care for themselves in every way. I see no indication for immigration to this section, and do not believe that it is probable that there will be much done on this line as long as the negro is a dominant factor for labor in the South. As long as cotton continues to be the principal product of the South, which will always be the case, in my opinion, it is just as necessary to have the negro and the mule as it is to have cotton. They go hand in hand, and I do not believe the white man will ever take the negro's place in the production of cotton. Immigration will probably build up certain sparsely-settled sections where there are but few negroes, but it will never amount to anything, in my opinion, upon the whole, so far as increasing the labor and white population of the South is concerned. I do not know that I can add anything else, except to say that all agricultural lands have advanced in value from 25 per cent. to 50 per cent. in the last two years and are in great demand. I think your paper has done a great deal towards the manufacturing improvement of this section of the country, and hope

you will continue to be successful in this line.

Nearly All Cotton Sold at Good Prices.

L. G. Council, president Planters' Bank of Americus, Americus, Ga.: The financial condition of farmers and business men in this section is equally as good, if not better than at this time last year. Having just marketed an extra fine cotton crop, very nearly all of which has been sold at good prices, the farmer has been able to cancel all of this year's advances and put himself upon a firm basis for another year. The very recent decline in the price of cotton will necessarily curtail the outlook for trade, which, of course, is subject to improvement with a more favorable reaction in the price of cotton. The South is sadly in need of more manufacturing interests, and it has, in my judgment, brighter prospects, as there is an increase of capital and population drifting to this section. The financial condition of the banking interests throughout the South was never better. The banks as a rule have more deposits and the general financial condition of their patrons are good. There is a very large amount of substantial improvements throughout this section—new buildings, diversifying the farms, grading the county public roads—and the towns, as well as the larger cities, are making remarkable advances. The South has every reason to be pleased with its present condition and progress.

In Brief.

H. H. Hunn, president Merchants and Planters' Bank, Pine Bluff, Ark.: Generally we have no reason to be dissatisfied with the condition in Southeast Arkansas nor with what at the moment seems the outlook for the coming year.

W. W. Moore, president First National Bank, Versailles, Mo.: A large brick and tile manufacturing plant is already running and a handle factory and other things are coming. There has been a large increase in bank deposits in two years.

Bastrop (La.) State Bank: Banking interests are better than ever before, and the people are in fine spirits, with bright prospects for the near future. Property has more than doubled in value in the past two years, and is changing hands at the advanced prices.

Mr. R. P. Eddrington, cashier First State Bank, Hillsboro, Texas: The financial condition of farmers and business men is better than usual. The prospects for manufacturing interests are the best for years, as is also the general good spirit of the people.

L. W. Norman, cashier Hertford Banking Co., Hertford, N. C.: New factories are springing up continuously and the prospects are bright for many more. Banks and deposits are rapidly increasing in the South. We invite immigration. We need labor to develop our resources. Send us some good labor and a few enterprising men to mix their capital with ours and rich results will follow. We feel encouraged as never before.

They Want the English Spinners.

Mr. P. H. Tansey, secretary and treasurer of the Corpus Christi (Texas) Board of Trade, writes to the Manufacturers' Record as follows:

"If it is not too late, will you kindly use your great influence in behalf of this Board of Trade and South Texas to the end that the English and continental cotton-spinners may visit this section when they arrive in the United States? Absence from the city prevented me giving this matter earlier attention, but I feel a word from you will make up for the shortcoming. Please ask them to come to Texas and we will show them the most growing and prosperous country on earth."

THE SOUTH AND THE NATION'S ENRICHMENT.

Since the publication in last week's Manufacturers' Record of letters from prominent business men in different parts of the country heartily endorsing the suggestion that the South should be free to develop to the best advantage its resources for the benefit of the whole country, other letters of similar purport have been received. These reveal, as did the earlier ones, a widespread dissatisfaction with the mere politician holding his own through cultivation of superficial and demoralizing issues. They express a readiness to support the politics that will make for the good of the nation and will permit men to devote their best energies to the development of substantial interests. The letters are as follows:

Asked to Be Freed From the Politician.

John Wood, secretary Commercial Club, Rock Hill, S. C.: "It is most gratifying to me, as it must be to all others who are engaged in similar work in the South, to note the sincerity and strength of the championship you have assumed in behalf of this section of our great country. To us down here the truth of your assertions as to the harmfulness of politics is apparent. We know too well the evils the politician has wrought. We ask only to be freed from him and his disturbing influences and to be allowed to go on our way, solving our problems by the light of intimate and dearly-bought experience, elevating our citizenship and maintaining it upon a basis of intelligence, conservatism and concern. What we have accomplished has come through a policy of participation by the worthy alone, a government of and by those measuring to a standard set too high for none who cared to fit himself for the responsibility of a voice. We believe we have proved the wisdom of our course, and point with pride to the wonderful advancement we have made in indisputable testimony thereof. That there should have been and that there still should be attendant circumstances to cause us sleepless nights and days of constant, unrelenting watchfulness and care is but the natural outcome of our emergence from a woeful state of insolvency and ruin and growth into the better condition of today. We have wrought this miracle ourselves. The politics of our best have been the politics of self-preservation and the consequent preservation of the whole. Our best and strongest have stood and do now stand upon no other platform, because our conditions have ever been peculiar and freedom to act without respect to them has been denied to us. Those who help us most recognize what we have done, and, recognizing, show confidence in our ability to manage in the future. We are not blind. We are not hidebound. We love our nation as all others love it and are serving it, laboring for the body of it by striving to make good and strong and fair the part of a Providence entrusted to our care. Those help us best in the fulfillment of our hopes by granting us a love of country and a concern for the rights of all men equal to their own.

"As the development of the South has become more fully realized, its growth in wealth, its abundance in opportunity and advantages have attracted attention in the North and West—all, mind you, resultant from the steady hand of those who took the tiller of our weakened craft lying idle in the shallow waters of some 40 years ago—there has been a gradually increasing influx of capital to find investment in our resources and of patriotic people to make their homes among us. But if there are many such to excite and win our admiration and esteem, there are others—they, too, increasing in numbers—who would reflect upon our intelligence by seeking to trade upon an assumption that we are not only weak and innocent, but fish full ready for the fly. Were it not for the seriousness of the false position in which these gold-brick dispensers are enabled to place us, when, empty of accomplishment, they return home to brand us unprogressive, narrow and exclusive, these gentlemen would be regarded with humorous compassion. Indeed, their wiles are but scantily protected from the darting straws when once the outer garments of glib speech and self-complacency are torn apart. Pity 'tis that some do rise to bait to be reminded afterwards of their folly by the prickings of the hook.

"The South is overrun with prospective garnerers of good things. Men with worn-out machinery would have us move it to free sites at our expense, build houses for it and furnish money for its operation under their exclusive management. They would be exempted from taxation (which, glory be, may not be granted in this State), be handed subscriptions to their worthless stock on silver salvers, be given rents for the honor of their coming. Their reasons for wanting to remove are abundant, and plausible, were it not for the fact that most of those whose removal South would be desirable have had business sagacity enough to locate wisely where they are and be content.

"We want people to come to us in good faith. Our inducements are many. We have climate, labor, power for machinery and money to aid those who desire to help themselves. We can assure less expensive production and facilities for reaching market. The South has lands for those who want to work and profits for the industrious unequaled anywhere, but it will not pay the passage price sought to be exacted by those who would take all we have and give nothing in return. Those who have come to us in good faith have prospered and brought others to do likewise. The stock peddlers and searchers for victims, in their efforts to better their own bad conditions, are reaping smaller harvests year by year. In short, the ability to wrest our present position of prosperity from surrounding adverse circumstances is standing us in good stead now by strengthening our confidence in ourselves and arming us with independence. Would that there were more general uprising among our people against that class of irresponsible, scheming fortune-seekers floating in upon us with the southward moving tide. They are as harmful as the politician, equally as disturbing, less easy to discern and disarm because they are more numerous, pursue less open ways and approach us through our proud concern for what will tend to place us farther to the front."

Superiority of Southern Resources.

F. B. Thurber of the United States Export Association, New York: "Responding to your invitation for an expression of views on the editorials entitled 'Power for the South' and 'A National Sheet-Anchor,' would say that if both the South and the North would follow the advice of the Manufacturers' Record it would be of great value to the nation. It is easier to preach, however, than it is to practice.

"The average Northern man who has not lived in the South cannot appreciate the importance of the race issue, and the Southern man who has not lived in the North cannot appreciate how the impulsive outbreaks of the Southern people shock the

less-impulsive law-abiding element of the North. Of course, we have the mob spirit in the North, but it is under better control, and instances of violence and bloodshed are far less per capita in the North than in the South.

"The Southern people are impatient of criticism, and some years ago, when I said in an address that 'whiskey and pistols were two of the things which stood in the way of advancement of the material interests of the South,' it was warmly resented by some of my Southern friends; but underlying these is a hot-headed impulsiveness on the part of the Southern people which stands in the way of their material advancement. No more honorable people exist on the face of the earth than the people of the South, but honor is not necessarily coupled with hot-headedness nor warm-heartedness with impulse. Because President Roosevelt invited Booker Washington to sit at his table the South at once assumed that the President was their enemy, when in point of fact they have no better friend. Personally, I think he made a mistake in the Crum appointment, but everybody makes mistakes some times, and we should judge men by the sum total of their acts rather than a single act.

"The resources of the South in fields, forests, mines, and more recently, factories, are superior to those of most other sections of our country. She has great advantages in climate, and the chief disadvantage, as it appears to me, is in the temperament of her people, which finds expression in radicals like Tillman and Vardaman, and even in the occasional outbreaks of the less radical element, of which Senator Bailey of Texas is an example.

"The people of the South are learning to work, and this brought to bear on the great natural resources of the South accounts for the rapid progress she has been making in material prosperity. But until the hot-heads and radicals are sent to the rear and the reasonable fair-minded element in the South is sent to the front she will not attract foreign capital and foreign labor to the extent of her needs."

Awakening to Southern Possibilities.

H. P. Meikleham, agent Massachusetts Mills in Georgia, Lindale, Ga.: "I agree with you heartily in your two editorials in your paper of the 17th of November.

"We seem to be awakening at last to the possibilities of our section, and it is due in a great measure to articles such as yours and the work you are doing. The brightest outlook any country ever had is in the future prospects of this Southland of ours. We have in the last 10 years gone through the greatest development of any country in any time, but what we have done in the last few years is but a stepping-stone to the glorious future we have before us, and it is for us to work out our own salvation. Let us progress upon broad-gauge lines, eliminate the narrow-minded element that dwells on the glory of our aristocratic past and teach our young men to work and achieve great tasks, forget all sectional feeling, and when developing our splendid Southern country they advance the whole United States. Destroy the prejudicial policies we now have and inaugurate a policy that can embrace and advance the whole country.

"As you say, the South may become the main reliance of the conservatism of the country against the progress of radicalism. It is stimulating to have opposition. Let us have a political party that will not only embrace the whole South, but will be welcomed by all sections. Make a policy that the 'Solid South' will back because it is conservative and progressive, and not because we have to be the 'Solid South' because the negro is a Republican and we cannot trust the Republican politician in the South.

"We have had broad-minded men from our section in the past; we can and should produce them in the future. When we do the 'Solid South' will be a thing of the past and we can become a power we could never hope to be."

Factional Politics Cannot Be Abandoned Too Soon.

John C. Avery, president of Chamber of Commerce, Pensacola, Fla.: "The editorials from the Manufacturers' Record conveyed to me with your letter of the 18th ult. have my hearty concurrence.

"I am a Floridian; have practiced law in the State for more than 30 years, and have never voted for a Republican candidate for office. I believe, however, that the time has come for the Southern vote to express the real principles of the voters in national matters. I am sure that more than half of the Southern people entertain views in full accord with much that now passes as Republican doctrine, and under normal conditions would vote accordingly.

"Hitherto there has prevailed a fear that the negro question could be handled safely only by voting against Republican candidates. This fear is disappearing, and many of our people realize that constant and blind support of Democratic candidates has not in any degree contributed to the solution of the problem or in the retention of control by Southern white people of the negro population. That control will and must continue, no matter what party succeeds in national elections.

"In the opinion of the writer, and in the opinion of many others with whom he has discussed the matter, an approximately even distribution of the Southern vote between the two great national parties will go further towards solving the problem and putting the negro out of politics than anything else.

"The course hitherto pursued in the South has resulted in factional politics and contentions within the Democratic party which are more demoralizing than a straight-out fight between opposing party organizations, and cannot too soon be abandoned."

Better to Combine Than to Combat.

Edwin Brobston of Brobston, Fendig & Co., Jacksonville, Fla.: "Your editorials are strong and to the point. I have ever been a loyal Democrat, but unless democracy means more than it stands for now I am likely to join the other side.

"Containing essence of things upon which the South must rely for strength and power, your recent editorials must attract more than ordinary attention.

"The South owes it to itself to let up on President Roosevelt. The South went into a tantrum over 'the Washington incident,' and because of that incident have we not said and done many things of which we should be heartily ashamed?

"After all, what proof have we that the incident occurred beyond an exaggerated newspaper story? When has the President either admitted or denied that he entertained a colored man on terms of social equality?

"The South once occupied a prestige position in the affairs of this nation. She maintained it until her commerce and general business interests became dwarfed through the maintenance of a political ideal. Her business supremacy was overcome, but her political ideals could not be shattered. Forty years have worked many changes; time brings healings in its wings, and today we stand on the threshold of a development period more magnificent than was dreamed of by the fathers. We have already

wasted much valuable time in hysteria about the negro question—time that were better spent in the upbuilding of our country. The negro is here and ours to do with as we will, and we are doing for him the best we can, perhaps; but far better would it be for us to loose a few congressmen than have this race question eternally disturbing the peace of our country.

"On almost every economic question the Republican policy is in line with the best interests of the South; the isthmian canal, the revival of our merchant marine, the extension of trade into the far East, the development of South America—all these tending towards opening of markets to Southern cotton, iron and manufactured hardwoods. These things and the legislation which fosters them are of more concern, or ought to be, than questions of taste on the part of some 'distant brother' in reference to the 'poor unfortunate colored man' whose parents were brought from Africa by a Yankee skipper some centuries ago, and about whom we have quarreled ever since.

"Why not let us sustain those policies which make for our national prosperity.

"The age of knight errantry may have possessed merit more admirable than the age of commercialism, but the age of commercialism is here. There is much in it to condemn, perhaps, but there is much in it to admire. One of the lessons that it teaches is that it is better to combine than to combat. Therefore, let us combine with those whose ideas of commercial supremacy are in accord with our own, rather than combat them on everything because we only differ on one thing. By taking this view of it the South can soon divide on questions of policy, and the quicker she does this the quicker will she regain the proud position once hers.

"If the Manufacturers' Record could call a monster convention of the industrial forces of the South to give expression along these lines it might have potent effect in drafting public sentiment along lines of conservatism and a more rational view of the things which most nearly concern all our people."

[Houston Chronicle.]

Mr. Edmonds is right. In Texas the people and the press are fully awake to the great opportunities of the present and of our paramount duty. Texas, as the largest of the Southern States—indeed, of the States of the Union—and the richest in resources, is taking the lead, and every other Southern State, with a united press and people, should follow and press forward with the idea of taking first place. The South's most pressing duty is to make its material development as great as possible and use the talents Heaven has entrusted us with to their increase.

We must improve our agricultural conditions; we must have more manufactures of every sort; we must increase our mineral wealth, of which nature has given us an abundant store; we have a vast timber supply—Mr. Edmonds wisely points out "the thousand and one woodworking interests for which it affords an opening;" we must attract immigrants and direct a tide of desirable newcomers hither, devising a wholesale systematic plan in which the whole South can co-operate that will prove effective. "As we have the foundation on which to build," Mr. Edmonds concludes, "having resources greater than any other section on earth, we shall have none but ourselves to blame if we fall short."

Let Southern men, therefore, pay less attention to politics and more to business. This is not only more profitable, but more patriotic. If Southerners would help the South, let them develop it, and every man, in proportion as he does this, will serve himself and his country at the same time.

Reasons for New England's Industrial Growth—VIII.*

[Special Correspondence Manufacturers' Record.]

Boston, Mass., December 5.

While the day seems far distant when the South will become an active competitor with New England in the manufacture of paper, yet to one unacquainted with the figures it will no doubt be a distinct surprise to find that of the 1178 paper mills of all kinds in the United States in 1903, 58 of them were located in Southern States. Maryland has 22, Virginia 13, West Virginia 7, Texas 4, Georgia and South Carolina 3 each, Missouri and Tennessee 2 each and Kentucky and Alabama 1 each. Some of these mills are of large size, while others are devoted to specialties, and still others are hardly past an experimental stage. But experimentation is the life of the paper trade in the North, and an army of chemists and mechanics are at work up here all the time to produce new processes, effects and methods, and it is quite within the realm of possibility that paper of many kinds made from cotton-stalks, cornstalks, bagasse or canestalks and rice straw, as well as tupelo gum, willow, other woods and pine shavings, will in the course of time represent an industry of large importance to the South. Chemistry and mechanics are performing such marvels all the time in every line that it would seem to be not altogether a dream to conceive that almost the only limit to the production of well-nigh anything out of any substance anywhere is the research and the skill of the investigator and worker. Time was, and not so very

long ago, when only rags were used to make paper; now it is only a mighty good quality of bond and record paper and stationery that is made wholly of rags, while all kinds of substances having fiber—principally spruce and poplar trees—enter into the composition of the various papers used. And chemical and mechanical treatment of paper has fitted it to take the place of the hardest substances, like the wheels of cars, and a vast number of other uses are made of the paper manufactured today. So with continued activity on the part of Southern paper-mill men, it is impossible to put a limit on the potentialities of a paper-making development in the South.

In the number of mills no State approaches New York, which has 296 mills, compared with 128 mills in Massachusetts and 328 for all New England, or for the five New England States outside of Rhode Island, the only one in the section which has no paper mills. The mere number of mills, however, gives but imperfect notion of the importance of any State's industry. While the wood-pulp mills at Herkimer, N. Y., are pioneers in their line and of present great importance, and while New York's paper production is enormous, there have recently grown up gigantic mills in Maine and other New England States, while for fine paper-making Holyoke continues to be the center of the country, and the Cranes at Dalton, Mass., make a line of fine papers which have become world-famous, as well as producing all the silk-fiber paper the government uses in the manufacture of its paper money and bank notes. The

Cranes, by the way, furnish another example of great growth from small beginnings. The original modest building in which the earlier Crane began the making of paper remains standing alongside the vast and magnificently-appointed factories required for the business of the house today. Yankee ingenuity and push are typified in the great success of this establishment, which now turns out 5500 pounds of extra fine writing paper, 6000 pounds of fine ledger and record paper, and in the government mill 1500 pounds of bank-note, parchment and bond paper every 24 hours. W. Murray Crane, the member of this firm who has just turned over his interests to his son, is the ex-governor of the State, who has been appointed to the United States Senate to succeed the late Senator Hoar, and he is everywhere regarded as one of the foremost men in the State, one whom all delight to honor. An example of his broad sympathies and helpful activity is evidenced in the establishment at the mill town of a community system, which is declared to be one of the most practical and successful efforts along the line of social betterment of wage-workers to be found in the country.

In the line of writing paper the most extensive operations in the world are conducted by the American Writing Paper Co., a corporation with a capital stock and bonds aggregating \$42,000,000, and owning and controlling 23 mills. Thirteen of these mills are at Holyoke and four are in other Massachusetts towns. Three are in Connecticut, and there are one each in Ohio, Michigan and Wisconsin. The annual product of this company is valued at about \$12,000,000.

Instances are numerous where the paper-making industry has been responsible for the creation of a prosperous and populous community in the wilderness. Although not so recent as some others, the operations of S. D. Warren & Co., very large and exclusive manufacturers of book paper, they furnishing the entire supplies which many of the leading magazines use, is a case in point. Some 60 years ago S. D. Warren located at Westbrook, Maine, and founded the business. In those days rags were exclusively used. The Cumberland Mills, which he built up, now turn out 200,000 pounds of book paper every 24 hours, largely made of wood pulp, which they buy in the fiber state. They employ 1000 hands, which form the basis of a town of some 8000 people, where the employees, mostly Americans, are conspicuously prosperous and largely own their own homes.

The International Paper Co., the so-called trust for the manufacture of news printing paper, has several of its most important mills in Maine, notable the one at Rumford Falls, where the water-power of the Androscoggin river has been extensively developed within recent years. There are 67 various kinds of paper mills in Maine. Twenty-five of them are wood-pulp plants of modern equipment and pretentious character, and so tremendous a development has followed their operations that when the New York Commercial recently printed an edition largely devoted to "Industrial Maine," the presentation of facts and advertisements reminded one of an edition of a Western or Southern newspaper in the halcyon days of their boom. Here were stories of prosperous towns and cities built up in a decade, of electric lights, electric street cars, water-works, paved streets and parks in places where scattering settlers or primeval forests only were to be found a few years ago, and there were whole pages of advertisements telling about recently developed water-powers, the great opportunities for investment, the occasion for varied industries and the inducements that would

be offered to them, the healthfulness and attractiveness of this and that locality as a place of residence—not a feature missing from the tale so familiar to those who saw and participated in the rapid development of Western and Southern sections when quick growth frequently brought such sudden advances in values as to make the fortunate ones wealthy overnight. Here is the one conspicuous exception where natural resources—raw materials—have been supplied to and utilized by the hustling Yankee, and the day seems far off when the lumber and wood-pulp interests of New England, particularly of Maine, will be otherwise than an important factor in her industries. For instance, I was informed by Col. E. H. Haskell, prominently identified with the industry, with offices in Boston, that a system of practical forestry has for some time been in effect with several companies, and that exhaustion of supplies is with them practically out of the question. Experts in forestry, government and others, have for years given the subject their close attention, with the result that, as is believed, crops of trees are being grown and harvested with as much certainty and regularity as are crops of corn and cotton on the farms of the West and South.

The International Paper Co., with its \$45,000,000 capital and control of more than 30 wood-pulp and paper-making plants in the United States owns, I am told, the title to 900,000 acres of spruce forests in this country, besides having the right to cut on 2500 square miles of forests in the Province of Quebec, and with this vast control of resources and with the forestry system in force it is not feared that there will be slightest difficulty in turning out for long years to come, at least, the present mill capacity of some 2000 tons of finished paper every day. Besides this, there are a number of other large companies similarly operating. It would appear that more attention than is generally understood to be the case is being given to forestry in New England, and that in Maine, New Hampshire and Vermont the reproduction of forests has been for some time proceeding on a practical and commercial scale. It may not be possible or feasible to grow the white pine giants, whose charred stumps stand as mournful reminders of departed glories in wide areas of Maine, but many other varieties, particularly the spruce and poplar, which are used in making pulp, seem to be susceptible of very successful culture. So it does not seem likely that "mankind shall be delivered from the flood of magazines" or Sunday newspapers, which the poet prayed for, through any failure of the one element which conspicuously made their profitable production possible, the supply of cheap paper, for which the discovery of the wood-pulp process is entirely responsible.

An illustration of the important part chemistry is playing in the manufacture of paper is furnished in the discovery and present uses of casein, used today for coating 99 per cent. of the book paper made in this country, although practically unknown a decade ago. Wm. A. Hall, now president of the Casein Company, then connected with the Fall Mountain Paper Co. at Bellows Falls, Vt., conceived an idea through chemical experimentation that a substance for coating paper might be secured from the solids or albumen of cow's milk. He presented the matter some 12 years ago to the J. A. & W. Bird & Co., the well-known chemical house, with principal offices in Boston, and with their help the process was perfected and the Bird Company became sole sales agents of the product. In this process a substance is extracted from skimmed milk, after the dairy or creamery has fin-

*This series of articles bearing upon New England's industry is intended as an inspiration for the South.

ished with the milk and it is ready for the swill barrels or the river, which has not only practically displaced all other book-paper coatings, but which furnishes the binder for 75 per cent. of all the cold-water paints now made; is used in making lithographic paper and wallpaper, and in the sizing and stiffening of burlaps, as an adhesive for the colors in colored shirtings, etc., and, as it is a waterproof glue and is not affected by dampness, even as a glue for veneers. Even yet its uses are not exhausted, for under enormous pressure it is made into various forms for which vulcanized rubber is now used. It becomes very hard and tough, and being a great non-conductor, is especially useful for electric buttons, keys, etc. Casein powder has a light-gray color; that made in imitation of rubber is a brownish black. I have seen a specimen made in imitation of amber, clouded and clear, that only an expert could distinguish as an imitation, and it has the advantage over celluloid that fire does not explode it. Experiments are being carried on with casein all the time, and the number and variety of its uses is wholly undetermined. Of course, as fast as perfected every product is strongly protected by patent.

Papermakers formerly used animal glue for coating and sizing, and the usual prejudice against innovations made it difficult to gain great headway at first. When it was demonstrated that casein made so much more of a waterproof finish than glue, as well as a nicer, softer one, and was less expensive, its use was begun

by papermakers in a way that has since resulted practically in a revolution. Glues were also largely used as the basis of cold-water paints, kalsomining, etc. With the decomposition of the glue particles the binder would be destroyed and the calcine would leave a mark on everything that touched it. Cold-water paints made from casein, which are marketed by J. A. & W. Bird & Co. under the name of Magnite, not only do not come off, but they are waterproof and weather and fire-resisting, adapted to both inside and outside uses, and can be put on at about one-fourth the cost of oil paints.

The Casein Company is incorporated, with a capital of \$6,000,000. The principal factories are at Bellows Falls, Vt., and Bainbridge, N. Y., where there are large dairies and creameries. As there are only three and one-half pounds of casein to every 100 pounds of milk, it is impractical to locate a factory at any place where there are not very large creamery interests. The casein factories give employment to a thousand or more hands, and are turning out products worth millions of dollars, which are sold in every part of the world, and still the farmer gets his milk back, somewhat impoverished, to be sure, but not rendered wholly useless, so that here is an industry of vast and growing proportions built up on a heretofore unused by-product as the result of one experimenter's attempts to improve paper-making. So I say give the South a few Aladdins like Hall, and no man can tell what may not come out of that favored section. ALBERT PHENIX.

other hand, made up largely of Paleozoic rocks. It is in these rocks and the crystalline area composed of schists and gneisses, which is supposed to represent the southern extension of the old Archean continent, that the chief mineral deposits of the State are found. To the south, and extending over an area of about 30,000 square miles, are the extensive deposits of the Cretaceous and Tertiary, and confined chiefly to these two periods are widespread occurrences of clays and marls.

The most valuable marbles are found in the crystalline area in the northern part of the State, and occur in Cherokee, Gilmer, Pickens and Fannin counties. Marble is quarried also in Whitfield county, the marble here being an extension of the belt that traverses East Tennessee. The narrow belt of marble that crosses the four chief marble-producing counties extends a distance of over 60 miles from Canton, Cherokee county, to the Georgia-North Carolina line. In Pickens county is located the main marble industry. The quarries are situated in the vicinity of Tate, and occur just north of the southern terminus of the marble belt. Here the deposit attains a thickness of nearly 200 feet.

Previous to 1884 Georgia marble was scarcely known, but now it has a wider use than any other marble quarried in this country with the exception of the marble coming from the Vermont quarries. The development of the industry has been remarkably rapid, and is due in a large measure to the work done by the State survey. The State survey not only originally called attention to these deposits, but to deposits of other economic minerals which have been developed as a result of the information emanating from this source. Many of the most costly buildings in the United States have been constructed wholly or in part from the Georgia marble. Among those that might be mentioned are the following: The State capitols of Minnesota and Rhode Island, St. Luke's Hospital, New York; the United States Government Building, Boston, and the Corcoran Art Gallery, Washington.

The granites and gneisses constitute the most important and extensively-used building stones of the State. They occur in inexhaustible quantity near Atlanta, and extend across the State in a northeasterly direction. The largest deposit probably in the world is found near Atlanta. This mass of granite is known as Stone mountain, which rises several hundred feet above the surrounding country, and is especially favorably situated for quarrying. Granite from the quarries located here are widely known and much used throughout the South. The stone obtained from the Stone-mountain quarries is a light-colored muscovite granite, which is excellent as a building material, being free from disintegrating chemical compounds and with few, if any, physical defects. Fine monumental stone is also quarried. It is obtained at the Elberton, Lexington, Oglethorpe and Meriwether quarries, where it occurs as a fine-grained biotite granite, admitting of a very brilliant polish. This industry is practically in the first stages of its development, but it is only a question of time when the Georgia monumental granites will be of great commercial value to the State. In the northern part of the State granites and granitoid gneisses are found in many localities, but as yet they are only quarried to a limited extent. In Cherokee county serpentine, which is one of the most beautiful of decorative stones, is found in workable quantities, and several columns of it were exhibited, along with the other building and ornamental stones, in the Georgia space.

In the extreme northwestern part of

Georgia, in the counties of Dade, Walker and Chattooga, occur the coal measures of the State. They are confined chiefly to Dade and Walker, but extend over an area of about 200 square miles. As in the other portions of the great Appalachian coal field, the Georgia formation is divided into upper and lower measures. The former attains a thickness of nearly 900 feet, and though it is the thicker of the two formations, it does not contain so many workable beds as the lower and thinner measures. On Lookout mountain, in the vicinity of the Durham mine, the upper measures are best developed. Here they carry seven different seams, only one of which, however, is worked. On the other hand, the lower measures carry as many as three workable beds, and are best developed in the neighborhood of Cole City, on Sand mountain, where the mines have been worked continuously for over half a century. In addition to the three beds mentioned, there are two others which are valuable in places where they attain a sufficient thickness.

The bituminous coal obtained from both the upper and lower coal measures is of an excellent quality, and has a high reputation as a coking coal and for heating purposes. It is much in demand as a bunker coal at the South Atlantic ports, being considered one of the best of the steam-producing coals. Of the more than 14,000 tons that are mined daily in the State, the greater part is used for coking purposes, the coke finding a ready market among the furnaces in the vicinity of Chattanooga. Mining is done chiefly by convicts leased to the operators by the State authorities, and though this sort of labor varies in efficiency, coal production has been steadily on the increase since 1890. In 1902 the output of the Georgia collieries amounted to 414,983 short tons of a spot value of \$589,018.

One of the most important iron-ore districts of the Southern Appalachian region is in Bartow, Polk and Floyd counties, which are situated in Northwestern Georgia. Iron ore occurs, however, in the Paleozoic rocks of the adjoining counties to the north, though not so abundantly as in these three counties, which comprise the richer section of what is known as the Cartersville district. The principal ores are hematite and limonite, the former confined chiefly to two different geological horizons, viz., the Weisner quartzite and the Knox dolomite, and the latter to the Rockwood formation, which corresponds to the Clinton iron-bearing formation of Alabama, of which it is the northern extension.

Hematite ore occurs at a number of points within the district in sufficient abundance to be worked with profit. It is usually found near the center of the Rockwood formation in continuous beds varying from a few inches to several feet in thickness. Each of these beds usually carries two varieties of ore. Of the two kinds, the soft variety is the richer in metallic iron, though not so abundant as the hard ore, of which it is the weathered surface, extending never to a greater depth than 10 or 15 feet. This ore has in Georgia a smaller output than the brown or limonite ore, but should the price warrant it its production could be increased to meet almost any demand, since over 150 miles of beds, outcropping with a thickness of two feet or more, are actually known. In places the ore can be economically mined to a depth exceeding 200 feet.

In the Cartersville district brown hematite or limonite occurs both as concentration and fault deposits. The concentration deposits constitute the most important deposits of the district. They may occur wherever a limestone is underlain by insoluble or impervious strata, such as

MINERALS OF GEORGIA.

By JOHN SHARSHALL GRASTY.

[Written for the Manufacturers' Record.]

The Georgia geological exhibit at the World's Fair occupied a position in the northwest corner of the Mines and Metallurgy Building, and was the most conspicuous exhibit in this part of the building. It covered a floor space of about 3000 square feet and a wall space also of nearly 1000 square feet. The wall space was occupied by transparencies, photographs and large polished slabs of Cherokee, Etowah and Creole marble. These and the columns of marble that surrounded the Georgia space amply emphasized this State's rank as a marble producer and formed the most striking feature of the exhibit.

The main floor space, however, was devoted to the exhibit of the economic minerals. These were appropriately shown in a number of large glass cases, one of which extended along the entire length of the western side of the enclosure. On the shelves of this long cabinet were specimens of magnetite, limonite, hematite, pyrites, corundum, garnet and numerous samples of auriferous ores. The typical minerals of the State had been collected by the State survey and were displayed in a series of parallel cases, the minerals being arranged in the order of the complexity of their chemical composition, starting with the native elements and ending with the most complex of the silicates.

A glass case containing bauxite and its finished product, aluminum, occupied the center of the exhibit. On its left was a pyramid of 84 cubes variously dressed on their several faces and representing the different building, decorative and monumental stones of the State. There was also a gem collection, which, though unimportant in itself, was an evidence that even the least important of the State's minerals was not neglected. But this makes it all the more inexplicable that coal, one of Georgia's chief economic products, was allowed to go unexhibited. An-

other peculiar feature of the exhibit was that gold, which in Georgia is of minor importance relatively, was abundantly represented in the exhibit by its various ores, and the space allotted to them was only second to that taken up by the marbles and building stones, which, because of their prime importance, formed, as has been stated, the conspicuous part of the exhibit. Georgia also had a small exhibit of brick and pottery clays in the section devoted to ceramics.

But for the misleading gold exhibit and the absence of a coal exhibit the Georgia mineral display would have been an excellent one, so well was the practical and economic side combined with the scientific. The omission, however, of coal from the list of its exhibits caused it, unfortunately, to lack completeness, and this obviously detracted from the value of the exhibit as a whole.

The exhibit was planned by Prof. W. S. Yeates, State geologist, and was installed under his direction at an expense of nearly \$7000. Owing to the fact, though, that the State survey had a fairly good collection of minerals on hand, very little of this sum had to be expended in collecting. The greater part of it was used in paying for the transportation of the exhibit to St. Louis and in covering the expenses and salary of the survey's representative. Mr. S. W. McCallie, assistant State geologist, one of the few geologists in the building, was in charge of the exhibit. His familiarity with the geology of Georgia made his presence there of very great value to the State.

The extensive and varied mineral wealth of Georgia is due to the fact that within its limits every geological formation occurs with the probable exception of the Jura-Trias. In the northern and central portions of the State ancient gneisses and schists are the prevailing rocks. The northwestern part of the State is, on the

sandstone or quartzite. In Northwest Georgia favorable conditions for this accumulation occur at the contact of the lower carboniferous limestones with the sandstones which sometimes underlie it, and at the contact of the Beaver limestone with the underlying Weisner quartzite. These concentration or blanket deposits are best exposed at Sugar Hill, 12 miles from Cartersville, where for the last few years they have been producing from 20 to 30 cars of high-grade ore daily, with no signs at present of approaching exhaustion. So great is the extent of this deposit that it is doubtful whether there is another limonite deposit in the South which even approaches it in size. The ore occurrence here is an excellent example of this type of deposit.

A large number of fault deposits are found in this district, being commonly found along the line where the dynamical forces have been most active. Along the great displacement of the strata known as the Cartersville fault are found the main ore deposits of the Weisner formation. The ore appears here in part to have filled an open fissure and in part to have replaced the schists, numerous fragments of which remain in the ore body, and consequently it occurs occasionally as well-defined fissure veins. They vary in size from a few feet to several yards in width and extend at times a distance of a quarter of a mile or more. The ore in these fissure veins is more or less porous and usually high grade in quality, but it dips so steeply that it is only worked to moderate depths.

Bauxite was first discovered in America in 1887 near Rome, Ga., and was first mined two years later at Hermitage in Floyd county. Since then it has been discovered both in Arkansas and Alabama. The greater part of the product, however, is still obtained from Northwest Georgia, where bauxite is found in extensive deposits associated with the residual clays of the Knox dolomite. The Georgia deposits of this mineral are found mainly in Floyd, Polk and Bartow counties. It occurs in pockets of variable size, some of which have produced as much as several thousand tons. The annual product for the past few years has varied from 1000 to 7000 tons. Georgia continues to lead in the production, however, sending the greater part of its product to Philadelphia, where it is used in the manufacture of alum.

Among the other economic minerals of Georgia are the following: Gold, asbestos, corundum, pyrite, soapstone, clays, slate, mica, copper, sand, tripoli, etc.

Gold occurs extensively, but in no instance in rich deposits. It has been mined for nearly three-quarters of a century, and at one time the State led in its production. The discovery of richer and more abundant deposits elsewhere resulted in the abandonment of many of the Georgia mines, some of which, however, have been reopened within recent years owing to the discovery of cheaper methods of winning the precious metal from its ores. The Georgia gold deposits are the southern extension of the Appalachian gold field, an auriferous belt extending from Alabama to Nova Scotia. In Georgia there are three distinct belts in which gold is distributed more or less abundantly. They are comprised in the following counties: Lumpkin, Hall, Cobb, Paulding and Carroll.

The clays of Georgia are abundant and widely distributed, and there is scarcely a formation in the State that does not furnish clays suitable for the manufacture of bricks and cheap grades of crockery. Residual and alluvial clays occur in Northern Georgia, while sedimentary clays abound in the central part of the State, occurring in the horizon of the Cretaceous. That the

clay industry is fairly out of its infancy is attested by the fact that the output last year was valued at over \$1,000,000, exceeding the output of any Southern State with the exception of the States of West Virginia and Maryland.

In Cherokee and Fannin counties copper was successfully mined previous to the Civil War, but the mines have since been abandoned and the industry has practically died out for the same reasons that affected the gold-mining industry. It is found also in other counties of Northern Georgia. The deposit in Fannin county is regarded as an extension of the Ducktown deposit in Tennessee, just across the State line. If this is true, it is not improbable that this deposit may yet prove to be a valuable one. Pyrite also occurs in the northern part of the State, and is found in large quantities in the eastern part of Lumpkin county. Soapstone also occurs in Northern Georgia, but is only mined to a limited extent. Graphite and mica are also found in this section of the State. In the northwestern part of Georgia, and particularly in the counties of Bartow, Floyd and Polk, manganese has been extensively worked for many years. The greater part of the asbestos mined in the United States is obtained in White county, Georgia, which is one of the northern counties. The State is richly endowed with road material, which is found in abundance all over the State. Finally, in South Georgia there are sands of the best quality. They are confined here mainly to the Cretaceous, though other sands, not so pure, but well adapted for building material, are widely distributed throughout the State. Marls, too, useful as natural fertilizers, are obtainable in nearly every county, but

occur most abundantly in the Tertiary and Cretaceous of South Georgia.

The first record of geological investigation in the State of Georgia is contained in a report issued in 1836. This first official geological report was compiled by John Ruggles Cotting, who made an economic survey of the counties of Richmond and Burke. The work was done under the patronage of the citizens of these two counties, and the report is addressed to them. A few years later Sir Charles Lyall visited Georgia, and his observations are contained in his "Travels in North America."

The first State survey, however, was not organized until 1874. Upon the creation of this survey George Little was appointed State geologist. The survey continued then under his direction for a period of five years. During this time there were published four separate reports. In 1879 the survey ceased to exist on account of lack of funds. Nevertheless, two later reports were issued as a result of the work done during the period 1874-79. One of these was printed in 1885 and the other as part of the cotton report of the tenth census. But after a decade had passed the survey was again revived, with J. W. Spencer as State geologist. He was succeeded by Prof. W. S. Yeates, the present incumbent, in 1893. Under his direction a careful survey of the State has been made, and in this he has been assisted by some of the best geologists in the South. No little credit for the excellent work that has been done is due W. S. McCallie, who since 1893 has done most of the field work and has also written the greater number of reports issued by the present survey.

tion, with plenty of light and ventilation. Usually each house is on a separate lot, with a yard in front for cultivating flowers and garden in rear where all the vegetables needed for living purposes can be raised. The mill builds and rents these houses at 50 cents per room per month. Thus, a four-room cottage would rent for about \$2 per month.

It might be that the head of a family would want to run a farm while the other members of the family worked in the mill. If so, land adjoining or in close proximity to the mill property can be procured at prices ranging from \$7 to \$15 per acre. On this land could be raised cotton, maize, wheat, all vegetables and many fruits, such as grapes, peaches and apples. There could be produced milk, butter, poultry and eggs for domestic use, or if, after the domestic requirements were satisfied, there was a surplus, it could readily be disposed of to the operatives in the mill village or in the surrounding towns, where there is always a demand for farm products. The cotton could be sold to the mill at prevailing market prices. Farms near a mill may be readily rented or worked on shares; that is, a farm might be rented by paying so much per year for the farm, or it might be worked on shares by letting the property owner have a certain amount of the crop as payment for the use of the farm, the tenant keeping the balance as his share.

Nearly all the religious denominations are usually represented in the mill village, with perhaps Methodists, Presbyterians and Baptists predominating in the order named. One mill village that we have in mind has an Episcopal church built of brick, also a Methodist and a Baptist church, both of neat frame construction. Besides these churches the mill has built a hall or auditorium in which any other denomination may hold services whenever they will, without any charges for rent, lights or heat.

There is in most cases a resident physician in each village, though the inhabitants are not confined to his services alone, as usually there are other physicians residing in the surrounding neighborhood who can be employed if desired.

Good schools can always be found in the villages, and equipped with efficient teachers. These schools are in many cases supported altogether or in part by the mill for the use of operatives alone, though some of them are a part of the public-school system and supported by the county government; but in no case is there any charge for tuition, the only expense being the purchase of books and material.

Many of the mills maintain libraries on whose shelves can be found books covering the various branches of standard literature, including technical subjects, and with a number of standard periodicals and trade papers on file.

A well-supplied store in the village usually furnishes the food supplies, fresh meats, clothing, dry goods and even tinware, glass and tableware. Anything that cannot be bought from the store can easily be obtained from the neighboring towns or neighboring farmers.

The people generally are industrious, cleanly and law-abiding, and though the majority are native Americans, there is among them an ever-increasing proportion of strangers from other countries. The Americans are from different nationalities in the past. Mecklenburg county, of which Charlotte is the county-seat, was originally settled by Scotch-Irish. The adjoining counties of Lincoln and Gaston were originally settled by Germans. The present inhabitants are descendants of these and other nationalities, and therefore almost any nationality would not be entirely alien here.

IMMIGRATION TO THE SOUTH.

By D. A. TOMPKINS.

This circular is intended to convey briefly the answers to such questions as would first rise in the minds of those contemplating removal from their native country to the United States. It is meant, first, for those who are now employed in textile mills and who wish to follow the same line of work here; second, for those who in pursuit of another occupation—farming, for example—can obtain convenient employment for the other members of the family, so that all may work together for better conditions and fuller prosperity.

The facts herein apply especially to the Southern States, and even more particularly to what is known as the Piedmont section, which is that part of the South on the foothills of the mountains. It is within the cotton-growing region, and yet within easy reach of the Philadelphia, New York and Boston markets, through which most of the manufactured products are sold. This fact has caused it to become the center of the cotton-manufacturing district of the South, there being within an imaginary circle whose diameter is 200 miles, and with Charlotte as the center, more than one-half of the spindles and looms in the South.

Due to the mild climate, cheaper foodstuffs, fuel and other living supplies, labor is able to live much better with smaller cost than in other and less-favored localities.

Perhaps the matter of wages would be the first consideration, so we will start with this subject and let the others follow in natural sequence.

The wages paid in a cotton mill will, of course, vary according to the skill and capacity of the operative, but the range

in the various departments is about as follows:

Picker-Room.	
Foreman.....	\$1.25 per day.
Operatives.....	\$0.65 to 1.00 per day.
Cardroom.	
Boss carder.....	\$2.00 to \$4.00 per day.
Second hands.....	1.25 to 2.00 per day.
Operatives.....	.65 to 1.00 per day.
Spinning-Room.	
Boss spinner.....	\$2.00 to \$4.00 per day.
Second hands.....	1.00 to 1.75 per day.
Operatives.....	.40 to .65 per day.
Spoolers.	
Boss spooler.....	\$1.50 to \$2.50 per day.
Operatives.....	.75 to .90 per day.
Weaverroom.	
Boss Weaver.....	\$2.00 to \$4.00 per day.
Second hands.....	1.25 to 2.00 per day.
Loom fixers.....	1.25 to 2.00 per day.
Weavers.....	.35 to 1.25 per day.
Clothroom.	
Foreman.....	\$2.00 to \$3.00 per day.
Inspectors.....	1.00 to 1.50 per day.
Laborers.....	.75 to .85 per day.

The highest wages are for overseers and the lowest for children, who are generally employed as doffers, sweepers, and some as spinners.

A family of five persons, ranging in age from 13 to 20 years, would earn about \$86.40 in one month. This is based on the supposition that they were divided among the various departments and drawing wages as shown below:

1 slubber hand, per month.....	\$19.20
2 spinners, per month.....	25.20
2 weavers, per month.....	42.00
Total.....	\$86.40

Many families of this size are now doing this. Larger ones would draw more and smaller ones, of course, less. A few families, all good workers, make \$100 per month and upwards.

The figures are taken from the payrolls of mills in this section and show the actual wages paid.

The houses are attractive though modest in appearance, of substantial construc-

When the United States was first settled by people from Europe the emigrant went in as great numbers to the Southern States as to any other part of the Union.

Manufactures and commerce were as prosperous in the early days in the Southern States as in any other part of the Union. The development in the Southern States of the institution of slavery discouraged the emigrant from going to that section as long as slavery existed. After the abolition of slavery, which was concurrent with the Civil War, there was a period of great confusion and bad government. This situation was as discouraging to the emigrant as slavery had been before it. About 15 years ago the ignorant ex-slaves, who were negroes, were practically eliminated from participation in government. Since then the States' governments in the South have been conducted with excellent efficiency and economy. Manufactures and commerce have revived and made a progress that has astonished the world. Now everybody can

obtain profitable employment. There is no competition with slave labor as formerly, but, on the contrary, there is demand for free labor at contingent good wages. The South now gets more emigrants from the most intelligent element of New England, Middle States and Western people than she is getting from Europe. This intelligent element has naturally come to a knowledge of opportunities that there are now in the South.

When the European emigrant finds what quick and excellent openings there are here the tide will turn and there will be a great flow of immigration to the South. Those who come first will naturally get the best opportunities. Most of the cotton mills are in position to take one or more families, give them houses to move into on arrival at the railroad station, and put the members of the families who wish to do so to work on the following day or as soon as they are ready to go to work. No previous experience or instruction is necessary. The necessary instruction is given in the mill by the present operatives.

VALUE OF TECHNICAL EDUCATION.

By J. C. MONAGHAN.

[Written for the Manufacturers' Record.]

According to the Prussian Minister of Commerce, technical education is the basis of Germany's industrial progress. In a speech delivered a few weeks ago at the dedication of a technical school in Sorav, an important city in the linen district of the German Empire, he laid great stress on technical education. He pointed out its importance to the nation's industries, and called attention to what it had done and was calculated to do when properly directed. It is only Mr. Moeller's way of emphasizing Bismarck's famous aphorism that the nation that has the schools has the future—"Wer die schule hat hat die Zukunft." Among the best parts of the minister's speech are the wise words used to urge his people to watch carefully, work hard and to prepare for an industrial warfare that will call out all their powers. He said those against whom our efforts have been directed are beginning to defend themselves. Markets in which we were once supreme are beginning to produce for themselves. This leads him to the thought that too great care cannot be taken by the empire in fostering its educational forces, for these, after all, are its chief resources. A nation that has to buy most of the raw materials it uses in manufactures in foreign ports, that has to depend upon foreign markets for its continuance as a textile and machine-making country, will have to keep up its technical schools. What the teacher has done in the past is not as well known as it should be.

He sat in the saddle with Von Moltke at Sadowa and Sedan; he was behind the Baron Von Liebig, Helmholtz, Bayer and the men who wrested the chemical industry from France and England. The boys trained by Liebig at Giessen were but the beginning of that practical method of associating the chemist with the dyer, bleacher and worker in all kinds of laboratories. It was the technical, industrial and industrial-art schools that made it possible for Germany to get a large part, fully four-fifths, of the world's trade in dyestuffs and of the trade in many of the medicaments made from coal tar. A day at the Baden aniline factory in Ludwigshafen or at the factory of Boehringer in Mannheim; Baden, near Heidelberg, is as interesting as a day in the Imperial Institute, Charlottenberg, near Berlin, or in the museums of Munich. Hundreds of trained chemists are at work in their laboratories looking for the secrets of nature. They are graduates of the empire's universities,

technical and industrial schools. Six or seven thousand trained chemists are in the empire's shops. They are paid a regular salary, considerably more than sufficient to keep body and soul from falling apart, and a percentage of the receipts or results of their discoveries. In a single year something like 30,000 tons of the precious products from coal tar of the empire's laboratories have been sent to all parts of the world. The United States took only a little less than 6000 (5650) tons in 1903; Great Britain took more than 6000 (6334).

Ten or twelve years ago the German Empire imported more than 3,500,000 pounds of vegetable indigo (3,556,780 pounds), valued at \$4,450,000. Today, thanks to Dr. Bayer of Munich and to the factories at Haechst, near Frankfurt-on-the-Main, and the Baden aniline factory at Ludwigshafen, the empire imports vegetable indigo for less than \$1,000,000 and sends out more than 9000 tons of the artificial product, valued at many millions. Here is the secret, certainly one of the secrets, of Germany's marvelous success in the last 30 or 40 years. There is something suggestive and inspiring in it. It is full of just what the South needs. If we are to make the most of what we have, and there is every reason why we should, it will have to be done along lines similar to those followed by the German Empire under the guidance of its Bayers, Helmholtzes, Humboldts, Hartmans, Hermisdorfs and Liebiges.

There is no doubt of the empire's indebtedness to this factor and that, but the factor of factors in all her recent achievements, in my opinion, has been her schools, but above all her technical, industrial, industrial-art and, quite recently, her commercial schools.

If the South is wise, she will not wait to be warned too often about this system of education. It has come to stay wherever it has been introduced. It has grown into the very life of the empire. Its roots have gone down deep into the agricultural, mining, fishing, manufacturing and commercial interests. It is based upon no idle conjecture or desire to experiment; it has become a demonstrated fact. No Tarquin was ever able to take from Sybil's hand so much that was worth taking as we can take from those who have experimented with technical, industrial and industrial-art education.

I urge no servile imitation, but energetic

emulation. Bismarck's aphorism is worth a good deal so far as it goes. The nation that has the schools may do much indeed, but think of the possibilities of a people that have the cotton, corn, coal, iron, limestone, etc.!

BUYING KEEN AT BIRMINGHAM.

Little Probability of an Increase in Output of Iron.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., December 5.

The firmness heretofore reported in the iron market has not only been maintained, but it has been intensified and there has been a material advance, stimulated by an active demand. In the beginning of it it was rather dragging. But the necessities of some buyers forced them into the market, and they came in expecting to supply their wants upon their own terms; but they found no weak spots in the market, and in some cases they experienced difficulty in supplying their needs at current values. They finally became convinced that the indifference of sellers was no fairy tale, and when they openly withdrew from the market and declined to price their iron it began to dawn upon them that there was some good reason for this action. They accepted the situation and commenced buying at current values. In the beginning the purchasers were small buyers, as a rule, but the aggregate of their transactions was sufficient to move the market out of the rut into which it had fallen. Inquiries concerning the market began to increase, and finally a demand set in that quickly absorbed all the offerings. Order after order was turned down, in some cases because the iron was not available and in other cases because of an indisposition to sell at current values. As the demand increased, values were raised until now the market is on the basis of \$13.75 maximum for No. 2 foundry, with sales of, in one case, of 3500 tons. And this lot goes to the West, where it is reported that Northern irons are quoted on a basis of 50 cents less. But everybody is not getting this price, and principally because very few can furnish the grades desired. Saturday 300 tons were sold on basis of \$13.50 for No. 2 foundry, shipment in January, and there was another sale of 1000 on the basis of \$13.75 for No. 2 foundry. There was also a sale of No. 1 foundry at \$14.50, but the amount was of moderate volume and had no influence on values. There was also a sale of one lot made up of Nos. 2 soft and foundry at \$13.50 for delivery in January. Some No. 3 foundry went at \$13 and some gray forge was sold at \$12.

Some interests are pretty well sold up now for the first quarter (all that they think prudence warrants) and are practically out of the market. There are none carrying a surplus. Practically speaking, their capacity is engaged for the first quarter. Gossip has it that among the sales made during the advance were two of 10,000 tons each for delivery extending through the first quarter. Your correspondent accepts the reports as correct, as they come from sources near the fountain head; but particulars as to price or destination are withheld. It is said that one of the lots will be worked up in this district. There has been much opposition to the advance on the part of some large holders of iron, and when your correspondent quoted it at \$12 he was assured that \$11 was high enough. But no sales were quoted thereafter under \$12, and the market gradually rose to its present value.

The demand has been so unexpected that these same parties now anticipate a run-away market, and they look for \$15 iron in the near future. Yet none of them want to see it. The buying has been

pretty keen, and it is only in keeping with the eternal fitness of things for the market to take its usual holiday rest. Just now it looks as if a little sagging of the market is in order before any further advance is made.

As to an increase in the output, there is very little probability of it. Attempts have been made to put idle furnaces in blast, which in all cases do not prove successful, and the supply of coke is very low. One large interest, anticipating a need for coke, has endeavored to secure it from the producers without satisfying any part of their needs. And one interest having 1500 tons of coke due it since last August is still awaiting its delivery. Numerous difficulties confront the furnace man on every hand and tend to the increase of the cost of iron.

For the information of the trade, it can be stated that the firm of Rogers, Brown & Co. has been appointed the Southern selling agents of the Alabama Consolidated Coal & Iron Co.

Today the Seaboard Air Line runs its first train into Birmingham from Atlanta. This marks a new era in the life and in the importance of this city. It gives us a new trunk line to the sea and opens up contributory territory to our markets.

So far, everything indicates great activity during the coming year in this district. The steel mill the past month made the banner run of 21,600 tons of steel rails, and have orders booked that will keep them busy for long months to come.

J. M. K.

Annual Report of Alabama Consolidated Coal & Iron Co.

At the annual meeting of the directors of the Alabama Consolidated Coal & Iron Co. held in Baltimore on December 1 President T. G. Bush made his report in detail on the operations of the company for the past year, making a very gratifying showing as to the operations of the company and the outlook for the future. Mr. Bush said:

"The affairs of the company are in a prosperous condition, particularly considering the very depressed period attending the iron business which practically covered the past fiscal year of this company, the price of iron during that period having run more dangerously near the cost of production than probably at any time in the past history of the iron trade.

"Among the interesting features of the report, which will be published later in condensed form for the benefit of the stockholders, is the statement showing the growth of the company from its organization to the present time, covering a period of five years. For the first year ending October 31, 1900, the output of iron was 67,034 tons, the output of coal 206,496 tons and the output of coke 72,673 tons. Each of these items shows a gradual increase from year to year as the properties were being developed and improvements made until the present year ending October 31, 1904, showed an output of iron of 135,610 tons, an output of coal of 530,106 tons and an output of coke of 234,096 tons. The record of the first six months of the fiscal year shows that had not the interruption occurred by the strike of the miners the output of iron would have been 150,000 tons or more, the output of coal 600,000 tons and the output of coke 270,000 tons. The output of coke was produced with the company having about 100 coke ovens idle during the year.

"Another interesting feature of the report is that in the sales of iron, coal and coke, amounting to \$2,270,000, there was not a dollar lost on bad accounts. The report as to earnings shows that for the five years, including the unprofitable year which has just passed, the net earnings

were \$1,648,494.52, which was sufficient to pay 7 per cent. on the preferred stock and an average of more than 6 per cent. on the common stock. It is a well-known fact that this company has paid regularly a 7 per cent. dividend on its preferred stock from the organization of the company, the twentieth quarterly dividend having been recently declared and paid on the 1st instant.

"The position as to the sales of iron of this company is strong, inasmuch as it carried during the depressed period a very large stock of iron rather than to sell same at the prices which ruled so low. This stock amounted to more than 30,000 tons on the 1st of November, and the company now has fully 20,000 tons of iron subject to sale and delivery between now and the 1st of January, 1905. It also has a fair percentage of orders on its books for the first quarter of 1905 at the present ruling prices, which, of course, are very profitable. This, of course, makes the prospects of the company from a financial standpoint interesting and promising, if the present market price of iron is to be maintained for any reasonable time. It is safe to say, however, that the dull period is a matter of the past and will probably not be experienced again in the iron business for several years to come.

"It is probably well known to the stockholders of the Alabama Consolidated Coal & Iron Co. that it owns about 75,000 acres of land, about 45,000 acres of which are mineral lands, coal and ore, and has developed its properties to the extent not only to meet its own requirements, but is now a seller of coal, coke, ore and limestone."

Tennessee-Kentucky Oil Field.

[Special Cor. Manufacturers' Record.]
Barbourville, Ky., December 5.

The old Stubensville division of Wayne county, after having held the record as the most prolific territory of its size in the United States for the past two years, is showing a falling off in production, although new wells are continually drilled in. The average production of high-grade in that division, which covers but a small area, has averaged between 9000 and 10,000 barrels weekly, and some weeks has run as high as 12,000 barrels. Quite a number of 100-barrel strikes have been drilled in during the past year, and it is because of a falling off in production of these wells, and not because there is a falling off in drilling, that the runs are declining. However, no alarm is felt, as the development is constantly being widened out and extensions proven.

The number of strikes in the Kentucky and Tennessee developments last month did not come up to expectations, as drilling rigs all over the field were out of commission, but most of the completions, especially in the older fields, were of larger caliber than usual. Of 35 strikes in the lower developments, three 100-barrelers were registered, and not a few 75-barrel strikes were made. The average per well is much greater than that of the preceding month.

Little has been accomplished from work in the wildcat fields lately. The old Ragland field of Bath and Rowan counties, in the upper part of this State, is now receiving renewed attention. Little has been going on in that territory, which makes all the heavy-grade oil output obtained in the Kentucky-Tennessee fields, until lately. Local operators are drilling, and last week a fair producer was encountered.

The upper fields furnished 14 strikes last month. The trend of development in that region is toward the Wolfe county division, which is showing up favorably by recent work.

Prices on crude are now on the advance.

Lighter grade is selling at \$1.03 per barrel, but this price is less by 21 cents than that quoted during the same period last year.

W. S. HUDSON.

Mining Pyrites.

Mr. J. Hibler of Lasley P. O., Louisa county, Virginia, who is interested in a pyrites mine there, writes to the Manufacturers' Record that after eight weeks' work he has a shaft down about 40 feet to a vein of ore of five feet solid and improving as the shaft advances. The tract upon which he is operating contains 100 acres of land, and this, he says, seems to be underlaid to a great depth with a high grade of gray granite susceptible to a high polish. He says that on November 25 he closed a 20-year contract for the opening of a large granite quarry to parties who will employ at least 100 men. He adds: "I expect to equip my mine about January 1. I am now working with first-class engine of about 50 horse-power and a boiler of 75 horse-power, and have ample machinery to operate the mine until that date. I have discovered a high-grade manganese ore which I hope to develop later. I expect to have a railroad spur two and one-half miles put into our property direct from Trevilian Station on the Chesapeake & Ohio Railroad."

Virginia Asbestos for Germany.

Dispatches from Bedford City, Va., state that the American Asbestos Co. of that city has made its first shipment of fiberizing asbestos. This suggests brief reference to this enterprise, one of the most important undertaken in Virginia during the past year. The first shipment was 100 tons, forwarded to Hamburg, Germany, and another order of 40 tons has been received from the same city. This product is fiberized at Bedford City, where the company has built a \$40,000 plant, the installation of machinery having been in charge of E. B. Craven, the inventor of the mechanical equipment used in the only other asbestos-fiberizing plant in the South, the one at Sall Mountain, Ga. The Virginia asbestos is found in Franklin county, some 12 or 14 miles from railway facilities, and it was necessary to transport the mining machinery over mountainous country on muleback. Experienced Western miners then set up the equipment. Terre Haute (Ind.) capitalists organized and control the American Asbestos Co.

Copper Mines in North Carolina.

Articles of incorporation have been filed for the Ashboro Copper Mining Co. of Ashboro, N. C., the capital stock being \$100,000, of which \$75,000 has been subscribed by New York and North Carolina investors. The company will develop copper mines on which considerable preliminary work has already been done. A shaft has been sunk to the depth of 72 feet. At 50 feet from the surface there is a vein which was followed by another shaft for 65 feet, and it is reported that a seven-and-one-half-foot vein of copper is exposed. The company's incorporators are Messrs. H. D. Sanders of Putney, N. Y.; S. M. Bradley of Morehead, Ky.; W. L. Thurber, A. J. Thurber, D. M. Holliday and M. W. Parrish of Ashboro, N. C.

Iron Furnaces Blowing In.

The furnaces of the Virginia Iron, Coal & Coke Co. of Bristol, Va.-Tenn., are being put in blast as rapidly as possible. The furnace at Radford, Va., was blown in December 4; one at Middlesborough, Ky., blew in November 21, and the Bristol furnace will blow in December 12. Each of these furnaces has been practically rebuilt and is now in excellent condition. The output of each plant should average 150 tons of foundry iron per day.

Texas Lignite for Gas.

Tests of Texas lignite have demonstrated its value as a gas-producer. Col. John G. Hunter of Dallas, Texas, in commenting upon the test in the Dallas News, said: "While only 135 units of heat are secured from the other coals, the Texas product gives 170 heat units. There is no doubt that steam engines will be gradually replaced by gas engines. It has been a question for a long time among big manufacturers and users of heat in quantities of when they could get to a point where lignite could be used in this manner. Hitherto only anthracite and charcoal have been considered available for this purpose, but these experiments show that lignite goes better than either. The quality of heat produced is adapted better at present to large concerns, but I believe that in time it will be used to furnish all kinds of heat for manufacturing purposes. A gas plant can be established and furnish the heat to all of the consumers in its vicinity. It will mean a big thing for Texas, especially for the Texas iron industry, and is destined possibly to change the whole system of providing fuel for manufacturing purposes."

Virginia's Artesian Supply.

Virginia is rich in artesian water resources which await development, and it is expected that the substitution of pure underground water supplies for those of the shallow wells and springs now so generally used will induce an improvement in the public health. Such has been the experience in Georgia, in Maryland and other States. An arrangement has just been completed between the United States Geological Survey and Dr. T. L. Watson, the recently-appointed State geologist of Virginia, for co-operation in the investigation of underground waters, including springs, wells and those public water supplies which are dependent on underground sources. Statistics regarding the springs, wells and water supplies throughout the State will be collected and published in a report to be compiled by Mr. M. L. Fuller of the United States Geological Survey, who has charge of the collection of the data concerning artesian water in the eastern half of the country. Dr. Watson will prepare a descriptive report on the occurrences and uses of the artesian waters and springs of Virginia. The preliminary investigations will be undertaken at once, with the expectation that they will be completed in the latter part of the summer of 1905, so that a report may be issued before the close of that year.

Steel Plant at Paden City, W. Va.

An addition to the iron and steel industry of West Virginia is now nearing completion. It is the plant which the Ohio Valley Steel Foundry Co. has been constructing for some months at Paden City, W. Va. The plant includes one cold, one roughing and three hot stands of rolls, two heating furnaces and an open-hearth furnace, a 20-inch bar mill, engine and boiler of 1000 horse-power, etc. A galvanizing plant and an electric-power plant will be added, also three more cranes of 15 tons capacity each. Pittsburg manufacturers control this new steel plant. They incorporated the company two years ago with a capital stock of \$150,000. Messrs. J. E. Schlieper & Co. of Allegheny, Pa., are the engineers in charge.

A Florida \$1,500,000 Fertilizer Plant

Recently the Armour Fertilizer Co. of Jacksonville, Fla., decided upon the erection of a new and larger plant. Having secured a tract of 20 acres of land as site for the establishment, the construction work is about to begin. It is stated that the company will be provided with modern

buildings having a floor area of 100,000 square feet, and machinery will be installed for an annual output of 25,000 tons of fertilizers. About \$1,500,000 will be expended.

Chance for American Automobiles.

An international automobile exposition is to be held at Berlin, Germany, next February 4-9. The exhibition will give special attention to motors for the transportation of persons and for sanitary, fire department and military service, motor wagons for freight, motor bicycles, motor boats and parts, belongings and materials for motor vehicles, together with tools, fixtures, clothing, drawings, maps and literature pertaining to the use of automobiles for sport, travel and transportation. United States Consul-General Frank H. Mason reports that such an exposition at Berlin has always attracted a throng of interested visitors from Austria, Russia and other neighboring countries, and that the exhibition next February will be far more extensive and complete than any of its predecessors. Some of the leading types of American runabouts, he says, are already sold and highly appreciated in Berlin, and the exhibition will present to American manufacturers an opportunity to bring their work easily and effectively before the German public. Automobiling, which began in Germany after it had become established and popular in France, England and the United States, has now reached the stage which makes Germany a ready market for many different types of machines.

Texas Water-Powers.

Mr. Thomas U. Taylor of the United States Geological Survey is the author of a report just published by the United States Geological Survey on the water-powers of Texas. Many an empire has boasted a less extensive domain than does the single State of Texas. Mere acres, however, do not constitute greatness. To soil must be added water, trees, men, farms, cities, factories, and perhaps the most important — certainly the first of these — is water. In proportion to the size of the State the water resources of Texas are not sufficiently abundant to make conditions in that Commonwealth ideal for farmer or manufacturer. Before the highest development can be reached men have need to tax their wits, utilizing every waterfall and storing every rain-drop.

In addition to the main rivers of Texas, there are at least 20 streams west of Colorado river which rise in springs and which constitute potential factors in the water supply and water-power of the State. These springs occur for the most part in the Edwards plateau, the most notable exceptions being those at Fort Stockton, Santa Lucia and at the head of Toyah creek in trans-Pecos Texas.

The water-power in many localities is only partially developed. There are, however, many plants in the State which have been built upon scientific principles, with modern machinery, and which obtain high efficiency. A large percentage of the plants now in existence are located on Guadalupe, Colorado and Brazos rivers and their tributaries. Guadalupe river easily takes rank as the most effective of the power-generating streams in the State. There are more power plants on Neches and Sabine rivers and their tributaries than on the rivers farther west, but these plants are usually only small mills of 6 to 30 horse-power, which are used for ginning cotton, sawing lumber or grinding corn.

In Eastern Texas the country is heavily wooded and is traversed by many small streams which are for the most part tributaries of Sabine river or Neches river and are not subject to sudden fluctuations in

height. The water is held back by the leaves, roots and low-growing vegetation which cover the earth, and it flows off gradually, so that there is little occasion for shutting down plants on account of low water. The power plants in Western Texas are larger, but the streams are subject to sudden rises and falls, especially the streams that flow through the mountains of Edwards plateau, such as the Colorado, Guadalupe and Nueces.

For Baltimore's Improvement.

A movement for concentrated and sustained work for the improvement of Baltimore by the building of a proper sewerage system, an increase in public-school facilities, a more perfect fire department, increased water supply and better system, a general union depot and improved highways took shape this week under the inspiration of Mayor Timanus. An organization was effected with Mr. E. Stanley Gary, president; Messrs. David Hutzler, Jacob Epstein and Charles W. Clipper, vice-presidents, and Mr. Charles England, secretary and treasurer. The mayor was authorized to appoint the following committees:

First—A committee of 15 to consider and recommend the best methods to be pursued in advocating the ratification of the proposed sewerage and Annex improvement loans at the municipal election in May, 1905.

Second—A committee of 15 to consider a comprehensive plan for the repaving of our streets.

Third—A committee of 15 to consider the present and future needs of our public-school system.

Fourth—A committee of 15 to consider the present and future needs of our fire department.

Fifth—An executive committee to further the purposes of this conference, which committee shall consist of the chairman and secretary of each of said four committees and the mayor as a member ex-officio.

These will report at a larger meeting to be held later. At the preliminary meeting were representatives of the several departments of the city government and of the Board of Trade, Merchants and Manufacturers' Association, Shoe and Leather Board of Trade, Produce Dealers, Municipal Art Society, Baltimore Clearing-house, Electrical Contractors, Fruit Exchange, Lime and Cement Exchange, Chamber of Commerce, Fruit and Produce Association, Charity Organization Society, Canned Goods Exchange, Old Town Merchants and Manufacturers' Association, Coal Exchange, Builders' Exchange, Real Estate Exchange, Tobacco Board of Trade, Lumber Exchange, Wholesale Grocers, Stock Exchange, Young Men's Greater Baltimore Association, the railroad and steamboat lines and numerous improvement associations of various parts of the city. The enthusiasm shown at the meeting indicated that the plans as sketched will take substantial form for the great benefit of Baltimore.

Wants to Represent Manufacturers.

Charles T. Beall of Greensboro, N. C., desires to represent several high-grade manufacturers of various kinds of machinery in his section. Engines, boilers, mill supplies, belting, injectors, etc., are the equipment desired. Mr. Beall has associated himself with a competent salesman, while he himself is a practical machinist, making a combination that can meet the demands of first-class representation in a successful way. He invites correspondence from manufacturers who may desire special representation in his section.

THE BOLL-WEEVIL MENACE.

New Orleans Cotton Exchange to Southern Boards of Trade.

The New Orleans Cotton Exchange strongly endorses the convention to be held at Shreveport next week to consider the boll-weevil situation and the ways and means for preventing the spread and ravages of this terrible menace to the cotton-growing industry of the South. In a circular letter to Southern boards of trade President A. Brittin and Secretary Henry G. Hester of the exchange say:

"Enormous as have been the ravages of this pest in the State of Texas, the damage and loss is trifling compared with what is certain to occur if measures are not taken to prevent their further increase.

"Notwithstanding the efforts at prevention under State aid, the weevil has crossed the border line of Texas, and since the summer of 1904 has migrated fully 50 miles into the State of Louisiana. At this rate it is only a question of time before the entire cotton-growing sections of the South will be affected.

"Already the control of the pest is beyond the scope of any one State, and every mile added to the boll-weevil district increases the difficulties of the situation. The all-absorbing question is, 'What shall be done about it?' It is to attempt a solution of this momentous issue that a national convention is called.

"This is a matter which does not affect the States of Texas and Louisiana alone. Nor is it a question in which the cotton States only are interested. At the moment Texas is the chief sufferer by reason of the many millions of dollars of cotton annually destroyed in that State and the spread and disaster in that section. Louisiana bids fair to follow rapidly, and in turn other Southern States will be affected, until the supply of raw material, on which the mills of this country—North and South—and of other countries chiefly depend to keep their spindles in motion, will be decimated to an extent which will bring widespread ruin and disaster in their train. Short crops of cotton mean high prices and reduced consumption. They mean hundreds of thousands of idle work-people and many millions of idle capital.

"Permanent decimation of the cotton crop of the South, which is certain to follow if methods are not devised to destroy the boll-weevil, means a reduction of exports to foreign countries and a consequent diminution of the nation's favorable trade balances to the extent of many hundred millions of dollars.

"There is no part of the entire United States that will not be more or less affected if the people stand idly by and let the work of devastation go on.

"To New Orleans and other Southern cities it means destruction of trade which will reverse present prosperous conditions for which we have reason to be so thankful to the Almighty.

"But we must remember that God cares chiefly for those who care for themselves.

"It is the proper exercise of their brains and intelligence that the American people owe, under Providence, their present pre-eminent position amongst the wealthiest nations of the globe, and it is only through the continuance of such exercise that they may retain and increase their prosperity.

"In this momentous question of possible eventual destruction of the cotton crop by the spread of the weevil every State of the Union is interested, not incidentally, but directly. With all the improvements in domestic manufactures little more than one-third of the cotton grown in the South is retained on this side of the Atlantic. Last year we sent abroad \$375,000,000 of raw cotton, and during

the past five years (from August 31, 1899, to August 31, 1904, inclusive,) nearly \$1,550,000,000.

"It needs no argument to show in what relation the exportable surplus of cotton stands towards the prosperity of the nation.

"The cry at home and abroad is for more cotton. Other nations are eagerly searching the world's surface for fields which may enable them to be less dependent upon the United States for raw cotton, while experience has taught that nowhere else in this broad globe can the staple be produced in quantity and quality sufficient for the world's needs. In the South we have lands which are capable of clothing the entire world, even at many-fold increase from present wants, and at prices which will defy competition while yielding a good return to the farmer.

"We have in cotton the equal of mines of incalculable future value to the United States and a certainty that 20,000,000 bales annually will in time be as eagerly sought for as 10,000,000 or 11,000,000 now are.

"Can the nation at large afford to permit this great wealth, present and prospective, to be destroyed without an effort? Can such values be permitted to be wiped out, as by the drawing of a sponge across a slate, for the want of a few millions of timely outlay in the way of prevention?

"To the commercial bodies of the South, to Galveston, Mobile, Memphis, Atlanta, Savannah and other thriving centers of the cotton section; to the cotton spinners of the Southern States and to the manufacturers of Maine, New Hampshire, Massachusetts, Pennsylvania and of other States of the North, East and West, we say, send representatives to the boll-weevil convention. It means a supreme exertion now at a most critical period for the protection of your future supply of raw material, and, in plain words, your future existence.

"To the exchanges of New York, Boston, Philadelphia and other Northern cities we say that while you may never have heard sufficient of the boll-weevil to attract your serious attention, unless we have your hearty co-operation now, the time is certain to come when you will learn too late that the pest has grown into a national calamity.

"The danger lies in that the pest which is spreading so rapidly has thus far proven beyond remedial measures. Numerous remedies have been proposed, but none yet discovered with a promise of success. The national Department of Agriculture has taken a deep interest in this matter, but thus far without definite result.

"It is to concentrate all efforts, individual, State and national, that the convention is called to be held within a comparatively few miles of the stricken section.

"There should be present delegates in such numbers and representing such sections as will give force and weight to its deliberations and conclusions.

"We say again this is not a cotton question alone, nor can it be localized in Texas and Louisiana or in the South. It is of vital moment to every branch of trade, and for that reason the banker, the manufacturer, the dry goods merchant, the grocery and hardware men and all other branches of business or callings which combine to make the prosperity of a great city or State should be represented. We call upon all commercial bodies of this and other cities and States to join in making the boll-weevil convention at Shreveport the success which the gravity of the situation demands."

During November 5160 tons of Peace river phosphate rock were shipped through Punta Gorda, Fla.

To Develop Parr Shoals.

Last week the Manufacturers' Record referred to the incorporation of the Parr Shoals Power Co. of Newberry, S. C., with a capital stock of \$50,000 and privilege of increasing to \$1,000,000. The company has since effected permanent organization with the election of the following officers: President, W. K. Sligh; secretary-treasurer, Z. F. Wright, with offices at Newberry, S. C. Messrs. Lockwood, Greene & Co. of Boston, Mass., have completed surveys of the water-power property which it is proposed to develop, and arrangements will be made to begin active construction work in the near future. It is expected that Parr Shoals, which is on the Broad river near Alston, S. C., will develop about 25,000 horse-power. This power will be transmitted by electricity for the purpose of operating cotton mills and other manufacturing plants in the territory available.

Reasons for Prosperity.

Mr. George Paish of the London Statist, after a trip through the United States, is of the opinion that this country has entered upon another period of trade expansion which is likely to continue for several years unless unforeseen disasters occur. He based his conclusions upon the following conditions, according to the New York Times:

"First, money is plentiful—too plentiful, say the bankers, looking merely to the low rates they have obtained this fall—and a plentiful supply of money at low rates means that no difficulty will be experienced in procuring capital for desirable objects. Second, there is no distrust, and the hesitation usual before a presidential election is now giving way to confidence. A plentiful supply of money plus confidence are two conditions essential to good trade. Third, a large section of the country is making good profits from the unusually heavy cotton, maize and other crops, with the exception of wheat, and from the relatively high prices at which they are being marketed. On the whole, therefore, the crops now gathered will greatly add to the accumulated wealth of the agricultural community. Fourth, prosperous agriculture means an active demand for manufactures and for transportation, and involves heavy consumption of coal, iron ore and other raw products. Hence, the profits of all sections of the community are increased. Fifth, the extension of manufacturing plants in recent years has been so great that a much larger output can be made without appreciable additional capital outlays, thus making a large portion of the new supplies of capital arising from the nation's surplus profits available for other purposes, notably construction of additional railway tracks, now badly needed on many lines to take care of the traffic."

Must the Street Cars Go?

[Tampa Tribune.]

"In the course of a few years there will not be a street-car track in all New York."

Such is the prophecy of a mechanical expert who, the Manufacturers' Record says, has built and rebuilt more street railways than any other man in the country.

The same authority declares that, owing to the cost of changes in methods and systems which inventive ingenuity has, ever since the passing of the horse car, been constantly forcing on the owners of street railways, it is doubtful whether as many as 5 per cent. of these have been operated at a bona fide profit.

Take, for instance, the cable as a means of propulsion. Its life is but a breath. Its installation and subsequent abolition cost

the owners of the many street railways as much as could be legitimately earned in 10 years of operation. Its replacement by electricity, involving changes in power plants, conduits and general equipment, cost enough in most cases to eat up the earnings of another decade, even with skillful management and growing traffic.

The process has been repeated time and again in different cities throughout the country. In Denver one of the most perfect cable systems in the country was in operation only five years when it was supplanted by electricity. The streets having been improved, the bicycle put this company out of business, forcing it into bankruptcy, the investors losing millions of dollars. Now the city has placed orders for automobile omnibuses to be operated on its perfect streets.

In London 400,000,000 passengers—more than the surface cars of New York haul—are annually transported in omnibuses drawn by horses, which are rapidly being converted into electric autobuses.

Years of expensive street-car changes in Los Angeles, Cal., are now being followed by rapid installation of automobile omnibuses.

The way has been paved for the change in New York through the recent construction of nearly 1000 miles of asphalt streets.

A few years ago there were no automobiles. During the last 12 months the automobile output of this country exceeded in value all the locomotives built in America by \$20,000,000, and the industry is scarcely out of its infancy.

The trolley car and the draft horse may go together.

Special Castings Salesman Wanted.

The Manufacturers' Record is advised of an opportunity for a salesman in the South to represent a prominent manufacturer in the sale of special castings on a commission basis. This proposition could be handled in connection with his services for any regular line or general supply house. The manufacturer mentioned is the Indiana Foundry and Machine Co. of South Bend, Ind., which has facilities for rapid production and prompt delivery, in direct railroad connection with the entire South, East and West, and is desirous of catering to the highest class of trade. Write the company for full information.

The South's Resources.

[Wilmington (N. C.) Star.]

The Manufacturers' Record furnishes the facts and the evidence that give us confidence in the future of the South. With resources so combined as they are to be found in the South, the Manufacturers' Record, in directing attention to them so strongly, is not merely optimistic, but clearly logical. As we have before remarked, the Manufacturers' Record is a tower of strength in the development of the unrivaled resources which our contemporary so ably demonstrates are so uniquely the South's.

To Represent Manufacturers.

A young man who has traveled the South for some time with marked success for a well-known house now desires to take up representation on his own account. He desires to act as manufacturers' agent in the South for an Eastern or Western establishment. Correspondence addressed to "H." care of the Manufacturers' Record, will be forwarded.

The report of Hon. H. B. Varner, commissioner of labor of North Carolina, shows that the number of textile establishments in the State have increased during the past year from 289 to 304 and the number of employes from 30,324 to 37,535.

The Iron and Metal Trades.

In its weekly review the Iron Age says:

"Our monthly blast-furnace statistics foreshadow a very large production of pig-iron at an early date. Capacity has increased from 334,000 gross tons on November 1 to 357,000 tons on December 1, and since the opening of the current month there have been further additions. Preparations are going on in different parts of the country for resumption. The United States Steel Corporation will at the opening of the year have practically its entire capacity in operation, there having been blown in lately idle furnaces in the Pittsburgh and the Wheeling districts.

"During the past month the steel companies made 960,626 gross tons in 30 days, as compared with 971,447 tons in 31 days in October. The merchant furnaces produced 478,954 tons in October and 519,976 tons in November, and, taking into account the reduction in stocks, the shipments were 599,553 tons in November, as compared with 505,368 tons in October, which further compares with 459,641 tons in August. In other words, general consumption has increased by 140,000 tons per month since August.

"With the steel works consuming 1,000,000 tons per month and the merchant furnaces shipping 600,000 tons and the charcoal furnaces making at least 30,000 tons per month, we are now using fully 19,500,000 tons of pig-iron per annum—a startling change when we make comparisons with the condition of affairs a year ago. When it is considered that we are approaching what is ordinarily regarded as the slackest season of the year, the conclusion seems warranted that there is a year of full work before us."

Literary Notes.

Calendars and Christmas cards are now the vogue. Persons who, in seeking them, desire a high order of lithography, apt illustrations and interesting text have a wide range of choice in the artistic publications of Raphael Tuck & Sons Co., Ltd., of New York city. The calendars are those ranging in price from five cents to \$3, and novelties in these are in the Rag-time Series, "It's Meeself," an Irish figure; "Law, Honey," a negro figure; "Good Luck to You," a Dutch figure, and "Merry Christmas," Santa Claus. These bear upon their face humorous cloth-dressed figures and chatelaine, and each is delivered in a patent mailing envelope of heavy cardboard. A unique and striking design is "Fair Blossoms for You," a jar of narcissus, with the calendar appearing under the presentation card. The Archie Gunn calendar will appeal to men and maidens still in the bloom of youth. "Fair Days and Happy Hours" carries attractive reproductions of costumes and architecture of two centuries ago, and "Peace on Earth" is the Christmas bell, which is the favorite of many.

Father Tuck's Annual, of course, leads for the young folks, with its stories by Nora Chesson, Annie Matheson, H. M. Burnside, M. A. Hoyer, Grace C. Floyd and Edric Vradenburg, and its illustrations in color and in black and white by F. Brundage, A. Dixon, M. Bolley, D. F. MacPherson, A. E. Joseph and May Sandheim; but "Tales from Longfellow," told in prose by Doris Hayman, and "Animal Friends," in color, will also be favorites. Pleasing designs appear in the smaller cards, with which must be included Tuck's post cards, so popular with travelers, and including among the cities covered Baltimore, Washington, Charleston, St. Louis, while there are in preparation cards for Memphis, Nashville, Dallas and Hot Springs.

The December Delineator, with its message of good cheer and helpfulness, will be

welcomed. The fashion pages are unusually attractive, illustrating and describing the very latest modes in a way to make their construction during the busy festive season a pleasure instead of a task, and the literary and pictorial features are of rare excellence. A selection of Love Songs from the Wagner Operas, rendered into English by Richard de Gallienne and beautifully illustrated in colors by J. C. Leyendecker, occupies a prominent place, and a chapter in the Composer's Series, relating the Romance of Wagner and Cosima, is an interesting supplement to the lyrics. A very clever paper entitled "The Court Circles of the Republic," describing some unique phases of Washington social life, is from an unnamed contributor who is said to write from the inner circles of society. There are short stories from the pens of F. Hopkinson Smith, Robert Grant, Alice Brown, Mary Stewart Cutting and Elmore Elliott Penke, and such interesting writers as Julia Magruder, L. Frank Baum and Grace MacGowan Cooke hold the attention of the children. Many Christmas suggestions are given in needlework, and the Cookery pages are redolent of the Christmas feast. In addition, there are the regular departments of the magazine, with many special articles on topics relating to woman's interests within and without the home.

A History of the United States. By Wadley Thompson. Publishers, D. C. Heath & Co., Boston.

In this work, which has been written for school use, the author takes the position that the chief event in American history is the war between the States, its causes, originating before the formation of the Union, having been strongly influential in the early stages of the country's development and its consequences still being felt. This position does not lead the author to devote undue space to the war itself, only 68 pages of the total of 489 of the text being occupied with that subject. That is but characteristic of the splendid regard for proportions on the part of the writer. He is a Southern man and has produced a text-book which may be safely and profitably used in all parts of the country. The style is simple and direct, the matter is arranged to meet demands both of chronological treatment and of topical review purposes, and the testimony to the fairness of the author's philosophy and his carefulness in handling facts generally in the book is given in the commendation of the chapters dealing with the war from Gen. John B. Gordon of Georgia and Gen. H. B. Boynton of Washington, D. C., who read the manuscript. The text is enriched with many illustrations and with maps graphically tracing the development of the United States.

One of the most interesting contributions to the latest number of the Sewanee Review is an article by Prof. William P. Trent on the teaching of literature, in that it attempts to define teaching and literature. But such phrases as "I well remember," "the present generation" and "new treatment of my younger students" make some of us feel quite aged in spite of our youth. Other features are "Otterburn: A Battle and Two Ballads," by Frank Jewett Mather, Jr.; "The Irish Literary Revival," by Cornelius Weygandt; "The Massachusetts Oligarchy," by Helen Henry Hodge; "John Wilson as an Essayist," by John S. Flory; "Recent Novels of Note," by Archibald Henderson; "Methods in Political Discussion," by Edwin Maxey; "George Frederick Watts," by George B. Rose; "John of Antioch, St. Chrysostom," by James Maynard, and "Two Brothers: John Paul Boccock and Walter Kemper Boccock," by Dr. John Bell Henneman, editor.

FOREIGN TRADE

GERMAN IRON TRADE.

Opinion Divided About the Outlook for Next Year.

Ad. Hamm & Co. of Hamburg, Germany, discussing in a letter to the Manufacturers' Record the iron trade in Germany, write:

"Business here is still very quiet, although the reports of the stock exchange indicate increased movement in the iron market, probably in order to give an encouraging appearance to the finances of the smelting works and coal mines at the close of the year.

"However, somewhat more favorable conditions are apparent for the near future, and apart from the cement works, the iron industry of Germany will derive immediate profit therefrom now that the great canal project has been passed in the Prussian Chamber of Deputies with a pronounced majority. Moreover, extensive orders for railway cars have been made by the Prussian State railway service. These are always placed about this time each year for the year to come.

"The tendency of the market is, in brief, expectant. If the consumption follows the tendency of the exchange, then business ought to be very much more lively here next spring. However, opinion in that regard is still much divided. In pig-iron there are active demands, especially 'spot' for the well-known pig-iron for cylinder mixtures (particularly for locomotive cylinders) bearing the 'E. L. L. A.' mark, which for many years has been well received in our market on account of its remarkable tenacity and resistance to fracture, as well as by reason of being a dense, tough, markedly homogeneous and elastic material, and especially also as a consequence of its advantageous price. This special pig-iron, mark 'E. L. L. A.' ought likewise to be of the greatest possible interest to American locomotive builders, and we take the liberty of asking you to refer such firms as desire particular details in regard to it to us."

Later Messrs. Hamm & Co. write:

"We would like to add to our letter of 18th of this month that business in Germany for rails for steam roads, etc., is remarkably flat and uncertain at present, and the prices for them are lower today than they have been for years, with absolutely no prospect of betterment in sight.

"Before the 1st of April of this year, that is, before the definite formation of the 'steel combine,' a number of dealers had made contracts with the various manufacturers of rails based upon the hope that through the labors of the 'steel combine'—as soon as this should come into active life—they would be able to dispose of their rails at a good advance.

"To the contrary, however, all these firms were woefully deceived, and the attempt to have the steel combination advance the prices of rails has up to the present failed, and the association itself offers rails today at six to seven marks per ton cheaper than these firms, in the spring of year, believed the very lowest to have been agreed upon. As a matter of course, the works are now insisting that their goods be taken, which cannot naturally be done on account of falling off in consumption.

"We make the above statement to illustrate, without any prejudice whatever, the present state of the market for that class of manufactures.

"Whether the fluctuation of the stocks, in which for quite a time many journals have been involved, is justified or not is a question which each may pass upon for himself."

Would Represent Manufacturers.

Jesus P. Contreras of Amatitlan, Guatemala, informs the Manufacturers' Record that he desires to represent in his country manufacturers of the United States.

F. Hey of Mexico City desires to do a general commission business and to represent manufacturers.

Julio Oscar Baehr of Santo Domingo, R. D., desires to obtain catalogues of manufacturers in the United States.

Trade in Malaga.

Carlos Engel of Malaga informs the Manufacturers' Record that there is a demand in his city for hams, bacon, butter, hides, leather, patent medicines, chemical products, etc.

Yellow Pine in Cuba.

Mr. Charles Elwell of Santiago, one of the largest lumber importers in Cuba, reports that yellow-pine prices are higher there than in the United States; that the native woods are too hard for building purposes, and that as conditions improve and the population increases the demand for yellow pine will advance.

Lumber Notes.

During November 14,669,500 feet of lumber, 36,589 crossies, more than 1,000,000 shingles, 31,450 barrels of naval stores were shipped from Jacksonville, Fla.

Mr. A. B. French of New Orleans, who is interested in promoting the expansion of the use of tupelo gum, believes that it may be utilized in some of the finer manufacturing purposes.

The Angola Lumber Co. of Wilmington, N. C., is installing machinery to increase its daily capacity from 60,000 feet to 120,000 feet. The Weed Distilling Manufacturing Co. is preparing to establish a mill of 60,000 feet daily capacity to saw lumber into material for paving blocks. Another new industry at Wilmington is an excelsior factory to use gum timber principally.

The National Association of Implement and Vehicle Manufacturers in session at Chattanooga, Tenn., elected Messrs. W. W. Collier of Detroit, president; C. F. Huhline of Louisville, chairman executive committee; H. K. Walcott of Batavia, Ill., treasurer; E. D. Medcalf of Auburn, N. Y.; O. V. Dodge of Kansas City, John W. Good of Moline, Ill., and Newell Sanders of Chattanooga members of the executive committee. A resolution was adopted looking to national legislation to overcome double taxation of businesses incorporated in one State and operating in others.

The Courier Informant of Bartow, Fla., has issued an attractive pamphlet telling of the opportunities in vegetables and fruits, in cattle and phosphates and in hunting and fishing in Polk county, and of the many advantages of Bartow, Auburndale, Winter Haven, Florence Villa and Fort Meade.

Mr. John T. Patrick proposes to further the industrial development of Texas along the line of the Southern Pacific by getting together 15 prominent capitalists of the North to camp out at different points along the line.

The Chattanooga Plow Co. has recently filled a \$15,000 order for a firm in the Argentine Republic, and has a representative traveling on a world-round trip in the interests of its foreign trade.

It is estimated that from 30,000,000 to 40,000,000 bushels of corn will pass through New Orleans during the next three months for foreign ports.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

ATLANTA & GULF.**Line of 400 Miles to Run Southwest From the Gate City.**

The Atlanta & Gulf Railroad Co. has given notice that it will apply for a charter in Georgia to build a line about 400 miles long southwest from Atlanta through Fulton, Campbell, Douglas, Carroll and Heard counties to the State line of Georgia, and thence southwest to the Gulf. Steam or electricity or both will be used.

Those interested are F. A. Kuhn, Kennon Dearing, R. B. Beedles, T. H. Goodwin, J. J. McClendon, Henderson Hallman, W. P. Powell, Hugh B. Cobb, D. P. Fleishel and J. R. Bradbury, all of Atlanta.

Such a line might strike the Gulf at either Pensacola or Mobile.

RALEIGH TO DURHAM.**Extensive Plans for an Electric Railway, With a Pleasure Park.**

The Raleigh-Durham Passenger & Power Co. has been chartered in North Carolina to build an electric railway about 25 miles long between Raleigh and Durham, with street-car lines in both cities, including two belt lines at Raleigh. It is also said that a pleasure park and possibly a hotel may be built at a point between Raleigh and Durham, and that light and ice plants will be constructed in the latter city.

According to a report from Raleigh, the principal interest in this enterprise is held by W. J. Nelms of Newport News, Va., the other directors being B. S. Jerman and Thomas S. Fuller of Raleigh, N. C., and Jones Fuller, F. L. Fuller and T. B. Fuller of Durham, N. C. The officers elected are: President, B. S. Jerman; vice-president, W. J. Nelms; secretary and treasurer, Thomas S. Fuller.

The power plant is to be established on the line between Raleigh and Durham, and Mr. Jones Fuller is reported as saying that, in addition to building the two belt lines in Raleigh, lines will be constructed on other streets. The track will be laid with 65-pound rails and the cars will have double trucks. A fast schedule will be operated. One of the belt lines will connect the Shaw University, the Pilot Cotton Mills, the State fair grounds, the penitentiary and the State hospital. The other will reach the Soldiers' Home, the Federal Cemetery and the union depot. The proposed pleasure park is to contain such amusements as are found at similar places in other parts of the country. Besides having a light and ice plant in Durham, the company may later go into the lighting business in Raleigh.

The application for a franchise in Raleigh is now in the hands of a committee of the city council, which is to report in about a week. Applications are also before the city council at Durham and the county commissioners in Wake and Durham counties.

The charter of the company is very broad, permitting it to engage in the manufacture of cars, automobiles, omnibuses, parts of cars, bridges, etc., in addition to the other purposes announced.

JOPLIN TO DENISON.**Missouri, Oklahoma & Gulf to Build 375 Miles of Railway.**

William Kenefick of Kansas City, a well-known railroad contractor, who with others incorporated the Missouri, Oklahoma & Gulf Railroad, is reported as saying that the company will build 375 miles of line in the Indian Territory next year,

and will take up and complete the line planned by the Muskogee Union Railway Co., which has rights of way secured from Muskogee to the Texas boundary and nearly 50 miles of grade completed.

The Muskogee Union runs from Muskogee to Corretta on the Missouri Pacific, and the extension to Texas will go via Henryetta, crossing the Fort Smith & Western at that point, to Denison, crossing the Red river there. In the other direction from Muskogee the line will run west of the Grand river, crossing the Missouri Pacific six miles east of Wagner, crossing the Missouri, Kansas & Texas at Pryor creek and the Frisco system at either Afton or Fairland, and continuing thence to Joplin, Mo., where connections will be made to reach Kansas City or else its own line will be built there.

The new road is to have a grade of .6 of 1 per cent. The location is to be established and right of way secured immediately, it being proposed to begin heavy construction as early in the spring as the weather will permit. Engineers are now said to be at work running the line between Muskogee and Joplin.

EXTENSIONS PROJECTED.**St. Louis, El Reno & Western to Reach Texas and Kansas.**

The St. Louis, El Reno & Western Railway will, it is reported, build an extension from El Reno, O. T., southwest to a point in Texas and another northeast from Guthrie to connect with another line in Kansas. President J. C. Van Riper of St. Louis and a party of other gentlemen from that city have just made a trip over the line.

Among those in the party were G. H. Walker of G. H. Walker & Co., bankers; Blakesley Collins of Whitaker & Co., bankers; D. D. Walker of Ely & Walker, dry goods company; Charles Scudder, capitalist, and Isaac H. Orr, secretary of the St. Louis Union Trust Co.

CHARTER RENEWED.**Natchez & Gulf Railroad Co. to Build From Natchez to Gulfport.**

The Natchez & Gulf Railroad Co., which proposes to build a line from Natchez, Miss., 195 miles, has renewed its charter. The company was chartered in October, 1902, by A. G. Campbell, president of the Natchez National Bank, who was also president of the Company, the other officers of the line being J. W. Lambert of Natchez, vice-president; W. W. Hungerford of Gulfport, chief engineer and general manager; W. H. Shields of Natchez, secretary, and S. H. Lowenburg, president of the Natchez Trust & Security Co., treasurer. The road is to run through long-leaf pine timber lands and an agricultural country.

Central Texas & Gulf.

The Central Texas & Gulf Railway Construction Co. has been incorporated at Kittery, Me., by Horace Mitchell and G. A. Mitchell of Kittery and A. M. Meloon of Newcastle, Me. It is not stated who is back of the company which it is said has been formed to build the Central Texas & Gulf Railway, nor is it announced where the proposed line will be located.

Western Maryland Work.

The Western Maryland Railroad Co. has completed that part of its Cumberland extension lying between Big Pool and Hancock, Md., about 10 miles, and will put it in operation December 19.

West of Hancock the heaviest work is being done on the extension. The Knobley and the Welton tunnels near Cumberland have been cut through and arching is in progress through the former, which is 1450 feet long. The Welton tunnel is 700

feet long. Indigo tunnel, which is the longest on the line, is 12 miles west of Hancock, and it is expected will be cut through in about four months.

The company proposes to build a second track at Baltimore between Fulton Station and Walbrook Junction, where the Tidewater extension to Port Covington begins. This second track will be about a mile long. The company is also buying property to further enlarge its terminal at Hillen Station.

Charleston to Summerville.

The Charleston & Summerville Railway Co., capital \$1,000,000, has been granted a commission in South Carolina to build an electric railway between Charleston and Summerville in that State. The line will be about 30 miles long, and the incorporators are J. J. O'Connell, George S. Legare and R. P. Evans of Charleston and Warren F. Martin of Philadelphia.

It is said that arrangements have been made with capitalists represented by Mr. Martin to finance the line, and it is proposed to push the work. The line will be built along the State or Dorchester road.

A Connecting Line.

Mr. B. E. Johnson, chief engineer of the St. Louis Belt & Terminal Railway Co., writes the Manufacturers' Record from St. Louis, Mo., that it is proposed to build 3.2 miles of double-track line to connect the St. Louis Belt & Terminal Railway at Walton Dale with the west belt of the St. Louis Railway at Easton Avenue, Mo. The contract for grading and masonry work has been let to John Scott & Sons of St. Louis and the Walsh Construction Co. of Davenport, Iowa. Work has begun, to be completed by April 1 next, under the direction of Mr. Johnson.

Trinity & Brazos to Extend.

Mr. R. H. Baker, vice-president and general manager of the Trinity & Brazos Valley Railway, writes the Manufacturers' Record that the company expects to do considerable construction next year. The line will be extended southeast from Mexia and north or northwest out of Cleburne, Texas.

The company now has 80 miles of line, and it has been rumored that extension would be made to Houston or Beaumont, and also to Dallas or Fort Worth.

Thebes & Western.

The Thebes & Western Railway Co. of Bloomfield, Mo., capital \$350,000, has been chartered to build a line 35 miles long from the Mississippi river in Scott county to the Castor river in Stoddard county. The directors are Cliff Glover, J. A. Glover and B. C. Harrison of Bloomfield, S. McCoy of Cape Girardeau and V. O. Boone of Bonne Terre.

West Fork Belt Line.

The West Fork Belt Line Railway Co. of Fairmont, W. Va., has been incorporated to build a line from near Meadow Brook on the West Virginia Short Line to a point near Bloom Station on the same line. The incorporators are J. M. Jacobs, C. H. Jenkins, Wilbur Griffins, J. M. Brownfield and Harry Shaw, all of Fairmont.

Twenty-two business firms of Charlotte, N. C., have formed the Great Merchants' Association, with Messrs. J. N. McCausland, president; John F. Yorke, vice-president; J. A. Solomons, secretary, and J. O. Gardner, treasurer.

Secretary Walter G. Cooper of the Atlanta (Ga.) Chamber of Commerce reports that 3788 permits for dwellings in the city have been issued since June, 1900.

MECHANICAL

A. S. Cameron Pump Exhibit.

It has been announced that the exhibit of the A. S. Cameron Steam Pump Works at St. Louis has been awarded the gold medal. This decision will be commended by all good judges of modern pumps. The company had quite a display at the exposition (see accompanying illustration),



A. S. CAMERON PUMPS AT ST. LOUIS.

and a number of its pumps were placed in actual service, forming a working exhibit and practically demonstrating their use and superiority.

The Cameron pump has no outside valve gear or moving parts. The steam valve works in line with the piston without the intervention of arms or levers, enabling the pump to run without danger at a great speed, and without liability of injury should the suction pipe be lifted out of the water. There being no dead center, they would start at any point of the stroke and run so slowly that the eye could hardly detect the motion of the piston rod, and were also operated with ease at a rate of speed unattainable in duplex type. The demonstrations given by the gentlemen in charge of the exhibit were indeed interesting.

Besides a number of regular patterns on

feed pump, a vertical deep-well engine, several contractors' differential pumps and the justly-celebrated Cameron vertical-plunger and piston-sinking pumps for mine service. Another type shown was a large pot-valve pump designed and to be adapted to mine-station pumping and heavy service. This is of a very modern type and is especially noted for use in mines which are subject to floods from surface drainages or workings or cutting

into subterranean bodies of water, which necessarily must be pumped out in short order, also where the water is strongly impregnated with sulphur and the use of the ordinary iron pump prohibited.

The works and general offices of the A. S. Cameron Steam Pump Works are on East 23d street, New York, and there are over 60 branches or agencies at home and abroad. A miniature catalogue of novel and attractive design and a new and complete catalogue are ready for distribution.

The Gillett Steamboat Engine.

Various avenues of industrial development in the South, as well as the growth of general commerce on her rivers, requires the use of small and large steamboats.

Stern and side-wheel boats are probably

for stern and side-wheel boats. The advantages of this engine are its low first cost, economy in steam consumption, simplicity, light weight, noiseless operation and other features. The cut-off operates the same when backing as when going ahead. The engine is economical because of the perfect operation of the valve gear, steam being handled very near the theoretical ideal. This, in combination with the small percentage of clearance, means economy.

The valve chamber on each end of the cylinder contains two piston valves, one above the other, each fitted with steam-tight rings. The lower valve is what is termed a line-and-line valve, allowing steam to be carried full stroke. The upper valve is the cut-off. The point of cut-off is varied by the spreader arms in the center, which are connected indirectly by levers and rods to a quadrant on the deck, permitting the engines to be worked at any desired cut-off by simply adjusting the quadrant lever in the center of the boat. The reversing of the engine is accomplished by the use of the well-known and time-tried sawbuck or link, which is handled as usual by levers extending up through the deck.

The construction throughout conforms to the best practice of today. The Gillett

largest piano factories in the country, and a recent inspection of the plant by a representative of the Manufacturers' Record was a most interesting and instructive experience. The plant is that of Charles M. Stieff, a name that is closely connected with the piano-manufacturing industry of this country.

Charles M. Stieff has been engaged for 62 years perfecting every detail of piano manufacture, and the Stieff plant is as complete and systematic as any that can be found in any industry. The product is known wherever high-grade pianos are demanded, has been adopted by many of the leading musical institutions and by some of the most talented artists of the world for their personal use.

The Stieff plant is not only equipped with every modern machine and device useful in a piano factory, but it is also provided with those conveniences that promote the comfort and health of the employees. Moreover, when the present factory was erected Mr. Stieff purchased surrounding land and built a number of dwellings which he has since sold, without profit, to a great number of the employees, allowing them to pay for their homes in weekly instalments. Just at present there are some 200 persons employed at



PIANO FACTORY OF CHAS. M. STIEFF.

engine is made in all sizes from 5x30 inches to 24 inches by 12 feet. The Jeanerette (La.) Lumber & Shingle Co., the F. B. Williams Cypress Co., Ltd., and many other operators in Southern lumber districts, also operators in other sections, are using the Gillett engine. Wherever it has been adopted the purchasers have arrived at the most satisfactory results. Government engineers have attested to the qualities of the Gillett engine. Messrs. Gillett

the plant, and the annual capacity in finished instruments is about 2000.

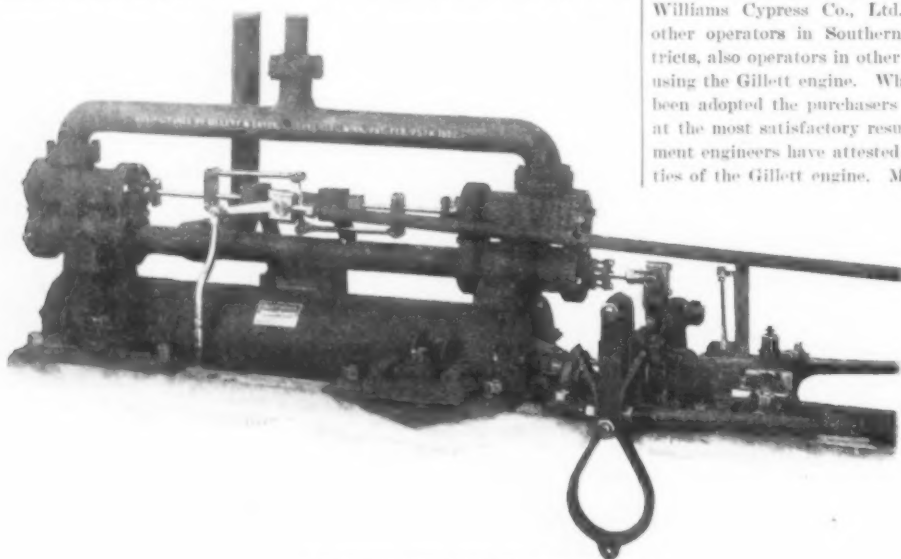
All of the different stages through which the piano passes during its construction, from raw material to finished product, was explained by Mr. Williams, of Charles M. Stieff.

The plant has several special machines (not seen in any other factory) for making some of the most delicate and important parts of the piano.

The various kinds of wood used are received from the mills in rough, unfinished state, and stored away to become thoroughly seasoned. They are then placed in a dry-kiln and when thoroughly dried are ready for the factory, where, in the hands of expert mechanics, they pass through the different stages of being sawed, dressed and fitted into various parts.

They are then passed on to the polishing department. This takes considerable time and patience, as it is impossible to rush this work, and after each handling the wood must be set aside a specified number of days before work on it may be started again. The last coat of varnish is applied in a dustproof room.

Upon the hammer which strikes the strings and produces the sound devolves the responsibility of the tone of the piano. This hammer is made out of the very best German imported felt, glued to a small piece of wood, and according to the hardness or softness of the point of contact on the hammer depends the tone of the piano; consequently, it can be readily perceived that the utmost care must be exercised that not only must the proper tone be



GILLETT'S STEAMBOAT ENGINE.

exhibition there was a "Cameron Fuel Oil Pump and Heater" for use in connection with an oil-burning system, the distinctive features being the by-pass valves and piping, to avoid, when desired, pumping oil through the heater. This is important, as exhaust steam may be utilized to heat the oil to any degree necessary by using the by-pass in connection with it. There were also an oil-line pump for handling crude oil or a fine petroleum, a vertical boiler-

more frequently met with in Southern waters than in any other section of the country, and it will therefore be of interest to refer to the improved modern machinery forming a part of such vessels. The engine adapted for a boat is one of the most important of its parts. This being the case, attention is called to the accompanying illustration of the Gillett Balanced-valve Variable Cut-off Steamboat Engine, a simple high-grade power machine

& Eaton, manufacturers of steamboat machinery, Lake City, Minn., build the Gillett engine.

A Modern Piano Factory.

One of the most universally-used products of manufacturing is the piano. Little do those who use pianos realize the extraordinary amount of skill and expert workmanship that is required in their construction. Baltimore has one of the

produced by each hammer, but that every hammer in the piano must be made exactly alike.

The key mechanism which operates the hammer is another very delicate part, and each and every key on the board must be so weighed and balanced that each one will require the same amount of pressure to operate it. The strings having been put in place, are now ready for the first tuning, which they receive before being placed in the case.

All of the different parts now being ready for the piano, they are assembled, and after receiving its final tuning the piano is a finished product ready for the market.

The factory is five stories high, with a four-story tower. It is equipped throughout with a sprinkler system in case of fire, and steam pressure is constantly kept on a pump which is capable of throwing 750 gallons of water a minute over the flag-staff of the building.

On account of the great precaution taken to prevent fire, the company states that last year the insurance companies gave a rebate of 80 per cent. of their premium.

American Factories in Germany.

In his annual report Vice-Consul-General George H. Murphy, at Frankfort, Germany, calls attention to a commercial movement which may exert a far-reaching influence on export trade. To avoid payment of duties many German manufacturers have in recent years found it profitable to establish branch factories in the United States. For the same reason, and also to protect their patent rights in Germany, several American firms have recently established factories in the vicinity of Frankfort. American shoe machinery is now manufactured here, and two companies are preparing to make shoe polish. Americans are also employed in several leather factories for the purpose of instructing German workmen in the art of producing soft shoe leather of a fine sort. The success of enterprises of this kind will naturally tend to reduce the importation of American shoes in Germany.

Automobiles in Quebec.

United States Consul W. W. Henry of Quebec reports that he "has seen, as yet, only four automobiles in this city of 70,000 inhabitants. There must be a market for a great many more. If the motor for boats is any improvement on the present gasoline motors I am sure there must be an opening for the sale of a great many of them among the large number of fishermen who have fishing rights on the numerous lakes and rivers in this vicinity. If some manufacturer would come here and attach his motor on a boat and demonstrate that it is better than any other, I am sure he would be able to make good sales."

Cottonseed Held Back.

Oil-mill managers of Memphis complain that while the products are decreasing in value, the seed remain at a price rendering mill operations unprofitable. Farmers are holding their seed in anticipation of a rise in prices. The receipts since the 1st of September at Memphis have been 150,548 sacks and 1903 cars. During the same period last year the receipts were 104,467 sacks and 1487 cars.

Fertilizer factories of Nashville have for months past been receiving large quantities of phosphate rock and are preparing for heavy spring trade.

Excavations for the \$1,000,000 dry-dock at the Portsmouth (Va.) Navy-Yard have been completed, and the piling will be finished within a few weeks.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

Fine-Yarn Mill Completed.

The Manufacturers' Record has previously referred to the plant which the Rhode Island Company arranged to build at Spray, N. C. This plant is now about completed and is producing 2000 pounds of single fine yarns every day, employing about 50 operatives and operating 5000 spindles. It is housed in a two-story structure, 75x212 feet, with a capacity of 10,000 spindles, to which complement the equipment will be increased in the future. Steam power is used. All the textile machinery was furnished by the Saco & Pettee Machine Shops of Newton Upper Falls, Mass. About \$80,000 has been invested. Lawrence McKee is the superintendent in charge of the Rhode Island plant.

The Arkansas Cotton Mill Co.

The Manufacturers' Record recently referred to the incorporation of the Arkansas Cotton Mill Co. for the purpose of acquiring and operating the plant formerly known as the Dardanelle Cotton Mills at Dardanelle, Ark. It can be announced now that the company will remodel the plant (wherein are 3000 ring spindles) and probably add to the equipment, beginning the work in January. In full operation the mill will employ 120 operatives. Messrs. John Henry English, No. 50 Leonard street, New York city, and W. A. Price of Belton, Texas, are the principals in the enterprise. The company is capitalized at \$100,000.

The Wylie Mills' Enlargement.

Last February the Manufacturers' Record announced that the Wylie Mills of Chester, S. C., had decided to add about 5000 spindles and make other improvements. The company is at present installing this machinery—to be exact, 6720 spindles—and by January 15 will have the new equipment in operation. It will then be necessary to operate the carding department at night. The Wylie Mills has been operating 6272 ring spindles and 2500 twisting spindles, producing yarns in skeins and warps, capital stock being \$100,000. An expenditure of probably \$75,000 is required for the enlargements noted.

Proposed Cotton Mill.

Reference was made last week to A. D. Woods of Columbia, Ala., as intending to build a cotton mill. Arrangements have not been completed for the plant, and Mr. Woods is prepared to correspond with mill engineers who may be in a position to become interested in the enterprise, furnish plans, assist in forming a company with capital of \$100,000 and place some of the stock. Mr. Woods has a water-power plant that will furnish 1500 horsepower, and is laying foundations for a two-story 84x212-foot building adapted to cotton manufacturing. He is not ready to give any consideration to machinery.

Clinton Cotton Mills' Enlargement.

In May last the Manufacturers' Record presented details regarding the No. 2 mill being erected by the Clinton Cotton Mills of Clinton, S. C. This addition is to accommodate 22,528 spindles and 548

looms, but probably only half this equipment will be installed to begin manufacturing. Some of the equipment is now being put in position, and in January it will begin producing cloth. The completed mill will cost about \$200,000. Messrs. O. A. Robbins & Co. of Charlotte, N. C., are the engineers in charge.

To Add 8000 Spindles.

An extensive addition will be built by the Newnan Cotton Mills of Newnan, Ga. The company has awarded contract to the R. D. Cole Manufacturing Co. of Newnan for the erection of the new building, to be 50x100 feet in size. An equipment of 8000 spindles will be installed in this structure when it is completed. There are now 17,500 ring spindles in the Newnan plant manufacturing yarns, twines, etc. Probably from \$100,000 to \$125,000 will be expended for the betterments.

Government Cotton Estimate.

The National Department of Agriculture estimates the total production of cotton in the United States in 1904-1905 at 12,162,700 bales, the production by States being as follows: Texas 2,002,300, Mississippi 1,539,800, Georgia 1,746,900, Alabama 1,278,900, South Carolina 1,099,700, Louisiana 917,900, Arkansas 832,700, North Carolina 609,000, Indian Territory 398,100, Tennessee 343,000, Oklahoma 246,000, Florida 77,200, Missouri 43,900 and Virginia 19,300.

The Cotton Movement.

In his report for December 2 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 92 days of the present season was 6,242,096 bales, an increase over the same period last year of 1,041,639; exports were 3,222,180 bales, an increase of 477,903 bales; takings by Northern spinners 808,258 bales, an increase of 157,445; by Southern spinners 691,959 bales, an increase of 67,806 bales.

Completing Its Addition.

The Greenwood Cotton Mills of Greenwood, S. C., is rapidly completing its addition, referred to at length in August last, and will be manufacturing with the new machinery about January 1. This company has erected a 130x160-foot addition to accommodate 10,750 spindles and 300 looms, and this machinery is now being put in position. Thirty-inch 5.15 yard goods will be manufactured. The expenditure amounts to about \$100,000.

Proposed Knitting Mill.

E. C. Smith of Edgely, S. C., mentioned several weeks ago as contemplating the establishment of a knitting mill at Williston, S. C., has made an affirmative decision as to the enterprise. He will install 25, and possibly 50 knitting machines to begin with, and water-power will be utilized. Contracts have not been placed for the machinery. Information and prices on knitting equipment are invited.

Seeking Southern Location.

The Business Men's Club of San Antonio, Texas, is corresponding with Edward J. Maher of New Haven, Conn., who claims to represent New England mill-owners who want to remove their plant to the South and are seeking a suitable location near the cotton fields for the enterprise.

Textile Notes.

The Morehead Cotton Mills of Spray, N. C., will install broad looms and has awarded contract for the new machinery. Present equipment is 7500 spindles and 160 looms.

The Travora Manufacturing Co. of Graham, N. C., has installed 100 additional looms and will manufacture heavy white goods.

The Voorhees Manufacturing Co. of Graham, N. C., has begun the installation of carding and spinning machinery. It has heretofore operated looms, 136 being in position.

The Centaur Knitting Co. has been organized by New York manufacturers for the purpose of establishing a knitting mill at High Point, N. C. The erection of building has begun.

A. M. Tyne of Jackson, Miss., has purchased the cotton-mill property of the Hashuqua (Miss.) Manufacturing Co. for \$26,000. He will remove the plant to another city and enlarge it before beginning operations.

Messrs. J. Freed, A. S. Elder, J. A. Landis, H. H. Elder and Leo Freed have incorporated the Trenton Cotton Mills of Trenton, Tenn., to operate the established plant in that city which they were recently reported as purchasing. The mill has 6000 spindles and 160 looms.

The Memphis Cotton Exchange will ask the co-operation of other exchanges in a petition to the Census Bureau to issue ginners' reports only after complete returns are at hand. The prevailing method of issuing monthly reports has been found to be confusing to the cotton trade.

The yarn and blanket mill of the Beagrass Woolen Mills Co. of Louisville, Ky., was damaged to the extent of probably \$8000 by fire during the past week. It will not interfere, however, with the production of goods. The carding machinery and some other minor machinery will be replaced as promptly as possible.

The Crow Hosiery Mill Co. of Monroe, N. C., will have its plant in operation by January 1. It has erected a one-story brick building, 40x180 feet, and the equipment of knitting machinery is now being installed, output to be 200 dozen pairs of hosiery. This enterprise was reported in August last and is capitalized at \$25,000. J. J. Crow is secretary.

The Cedar Falls (N. C.) Manufacturing Co. has completed improvements and extensions which make its plant thoroughly modern and increase capacity by 20 per cent. All out-of-date equipment has been discarded and the latest improved devices have been installed in its place. The Saco & Pettee Machine Shops of Newton Upper Falls, Mass., furnished most of the new machinery.

Messrs. Fowler & Lawler of Little Rock, Ark., will establish a plant in Nashville, Tenn., to be known as the Nashville Carpet-Cleaning & Rug Manufactory, investing about \$10,000. As indicated by the title, the plant will clean carpets and manufacture rugs. Looms will be installed and 20 weavers will be employed. The firm contemplates establishing other plants in Tennessee cities.

Messrs. Robert L. Caviness of Coleridge, N. C.; Daniel H. Lambert of Cole's Store, N. C., and John M. Caviness of Moffitt, N. C., have incorporated the Enterprise Manufacturing Co. with capital stock of \$100,000 for the purpose of manufacturing cotton goods. The company will acquire and operate an established plant at Coleridge, purchased in October last by R. L. Caviness. There are 4624 spindles in position.

The State penitentiary system, through employment of convicts in levee building and in growing sugar and cotton, will yield Louisiana this year between \$60,000 and \$70,000 profit.

About \$500,000 worth of improvements are under way at Beaumont, Texas.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failure on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and more attention than a mere circular.

BALTIMORE BUILDING NOTES.

Business Buildings.

Baltimore—Dwellings.—The Sadtler estate, Maryland Telephone Building, Lexington and Courtland streets, has awarded contract to John S. Moke, builder, 16 Clay street, for the construction of eight dwellings to be located on St. Paul street, between 25th and 26th streets, after plans and specifications by Jacob F. Gerwig, architect, 16 Clay street. Structures to be three stories high, 17x43 feet; brick with stone base and trimmings; tin roofing; galvanized-iron cornices; gas fixtures; sanitary plumbing; heating systems; cost to be about \$31,000.

Baltimore—Terminal Warehouse.—Carrington & Carrington, 110 East Lexington street, attorneys for George E. Shaw of Philadelphia, Pa., has awarded contract to John A. Sheridan Co., builders, 221 North Holliday street, for the construction of three stories on the present one-story warehouse located at Block street and the water-front. The building, which is 17x407 feet, will be used as a terminal warehouse.

Baltimore—Office Building.—The Maryland Life Insurance Co., 410 West Fayette street, has awarded contract to George A. Fuller Co., builders, 203 North street, for the construction of its office building to be located at 8 and 10 South street, after plans and specifications by Parker & Thomas, architects, Union Trust Building, Charles and Fayette streets. Structure to be six stories high, 48.1x100.8 feet; white marble exterior with granite base; concrete foundation; reinforced concrete construction; slag roofing; fireproof throughout; copper cornice and skylight; fireproof vaults; prismatic vault lights; metal frames and sashes glazed with wireglass; cast-iron stairway; ornamental iron grille work; sanitary plumbing. Electrical work, heating and ventilating systems and elevators not included in contract. This building previously mentioned.

Baltimore—Office Building.—The United States Fidelity & Guaranty Co., 16 West Saratoga street, has purchased two lots adjoining

its former location at southwest corner of Calvert and German streets. Parker & Thomas, architects, Union Trust Building, Charles and Fayette streets, as previously reported, prepared plans for an 11-story building, but since the purchase of the additional property it is reported that a seven-story fireproof office building will be erected on the site, which is 70x92.9 feet.

Baltimore—Store Building.—Further details have been obtained concerning store building for J. C. C. Justis, 17 Clay street, to be located at southwest corner of Baltimore and Light streets, after plans and specifications by Tormey & Leach, architects, 325 St. Paul street. Structure to be three stories high with basement, 17x50.4 feet; brick with granite base and Indiana limestone trimmings; concrete foundation; steel beams; tin roofing; copper cornice; metal ceilings; metal frames and sashes glazed with wireglass. Electric wiring and fixtures, plumbing and heating system not included in contract. Wm. Ferguson & Bro., 214 Clay street; John Stack & Sons, 250 West Preston street; John Cowan, 106 West Madison street; Thos. L. Jones & Son, 410 West Saratoga street; C. C. Watts, 113 Hamilton street; John Hiltz & Son, 3 Clay street, and J. J. Walsh & Son, 1529 Maryland avenue, have been selected to estimate on the construction. Estimates to be in December 12.

Baltimore—Warehouse.—Henry D. Dietz, trustee (Baldwin & Frick, agents, 234 North Charles street), has awarded contract to Tatterson & Thuman, builders, 214 North Liberty street, for the construction of warehouse to be located at 41 South Liberty street, after plans and specifications by Tormey & Leach, architects, 325 St. Paul street. Structure to be five stories high with basement, 27.8x86.10 feet; brown brick with granite base and artificial limestone trimmings; concrete foundation; steel beams; slag roofing; galvanized-iron cornice; vault lights; granolithic pavement; ornamental iron grille work. Electric wiring and fixtures, elevator, plumbing and heating system not included in contract. This building previously mentioned.

Baltimore—Dwellings.—George C. Goldman, builder, Woodburne avenue, near York road, will erect for himself 17 dwellings to be located on East Lynne avenue, near Frederick street. Structures to be two stories high, 12.4x38 feet; brick with stone trimmings; tin roofing; galvanized-iron cornices; gas fixtures; sanitary plumbing; cost to be about \$10,000.

Baltimore—Warehouse.—John S. Bridges, 28 South Charles street, has awarded contract to Brady & Watters, builders, 332 St. Paul street, for the construction of warehouse to be located at 26 South Charles street, after plans and specifications by Wyatt & Nolting and George N. Mackenzie, third, associated architects, Builders' Exchange Building, 2 East Lexington street. Structure to be four stories high with basement, 22x99.1 feet; brick with granite base and Indiana limestone trimmings; concrete foundation; steel beams; slag roofing; galvanized-iron cornice; metal frames and sashes glazed with wireglass; vault lights; metal ceilings; electric wiring and fixtures; sanitary plumbing; steam-heating system. This building was erroneously reported at being included in the contract for the construction of 22 and 24 South Charles street, which was awarded to C. S. Williamson, builder, 18 East Lexington street.

Baltimore—Dwelling and Stable.—O. B. Schler & Bro., 2701 Mt. Vernon avenue, has awarded contract to J. H. Walsh & Bro., builders, 406 South Charles street, for the construction of dwelling and stable to be located at northeast corner 27th street and Mt. Vernon avenue, after plans and specifications by Edward L. Walsh, 406 South Charles street. Dwelling to be street stories high, 37x80.9 feet, and stable two stories high, 30x75 feet; brick with stone trimmings; concrete foundation; slag roofing; galvanized-iron cornices; gas fixtures; sanitary plumbing; steam-heating system; cost to be about \$8000.

Baltimore—Store Building.—Mrs. E. M. Shipley has awarded contract to John A. Sheridan Co., builder, 221 North Holliday street, for the construction of store building to be located at 907 and 909 West Baltimore street, after plans and specifications by Butler & Rodman, architects, 335 North Charles street. Structure to be two stories high with basement; ornate brick front; concrete foundation; steel beams; cast-iron columns; galvanized-iron cornice; prismatic glass;

electric wiring and fixtures; sanitary plumbing; steam-heating system.

Baltimore—Restaurant.—Vincent Pipitone, 702 East Baltimore street, has awarded contract to George R. Heath, builder, 314½ Courtland street, for the construction of restaurant to be located at northeast corner of Lombard and Grant streets, after plans and specifications by Hoyt & Mackintosh, architects, 11 East Pleasant street. Structure to be three stories high, 19.3x30.6 feet; brick with granite base and sandstone trimmings; concrete foundation; steel beams; slag roofing; galvanized-iron cornice; metal ceiling; electric wiring and fixtures; sanitary plumbing; steam-heating system. This building previously mentioned.

Baltimore—Office Building.—Further details have been obtained concerning office building for the Law Construction Co., Wm. G. Speed, treasurer, Wallis Building, Courtland street near Lexington, to be erected on Courtland street near Lexington, after plans and specifications by Charles E. Cassell & Son, architects, 411 North Charles street. Structure to be eight stories high with basement and sub-basement, 65x100 feet; iron-spotted brick with ornamental terra-cotta and stone trimmings; concrete foundation; steel-frame fireproof construction; reinforced concrete floors; slag roof; galvanized-iron cornice and skylight; electric wiring and fixtures; sanitary plumbing; steam-heating system; three electric elevators. As previously mentioned, R. H. Frazier & Sons, builders, 220 St. Paul street, have been awarded the contract for the construction of the building.

Baltimore—Lodging-house.—L. Lipsitz, 653 Columbia avenue, has awarded contract to Gustav Stohr, builder, 1334 North Stricker street, for the construction of lodging-house to be located at 22 Center Market Space, after plans and specifications by Henry J. Tinley, architect, 421 St. Paul street. Structure to be three stories high, 25x65 feet; Roman brick with granite base and stone trimmings; concrete foundations; steel beams; slag roofing; galvanized-iron cornice; gas fixtures; sanitary plumbing. This building previously mentioned.

Baltimore—Dwellings.—Charles B. Burdette, builder, 1812 West Lexington street, will erect for himself six dwellings to be located at southwest corner Charles and 27th streets, after plans and specifications by Geo. Clothier, Jr., architect, 2122 Chelsea Terrace. Structures to be three stories high with basement, each 19x108 feet; iron-spotted brick with marble base and trimmings; concrete foundation; tin roofing; galvanized-iron cornices; electric wiring and fixtures; sanitary plumbing; steam-heating systems; cost to be about \$35,000.

Baltimore—Warehouse.—Additional buildings have been selected to estimate on the construction of four-story warehouse for Walden C. Nimmo, 327 North Calvert street, to be erected at 109 and 111 Cheapside, after plans and specifications by J. E. Laferty, architect, Builders' Exchange, 2 East Lexington street. The Woodruff-McLaughlin Company, 100 East Lexington street; Willis & Mason, 22 East Lexington street; Charles L. Stockhausen, National Marine Bank Building, Gay and Water streets; Cramp & Co., 407 St. Paul street; Jacob Peters, 411 St. Paul street; J. H. Miller, 110 Dover street, and R. H. Ford Construction Co., 407 St. Paul street. Full details concerning the building and the names of the other builders submitting estimates were mentioned in this column last week. Bids to be in December 8.

Baltimore—Warehouse.—The date for submitting the estimates for the six-story warehouse for Mrs. Lydia H. Howard and Miss Mary W. Davis (Alexander Yearley & Sons, agents, Builders' Exchange Building, 2 East Lexington street), to be located at Calvert, Water, Cheapside and Lombard streets, after plans and specifications by Elliott & Emmart, architects, 1101 Union Trust Building, Charles and Fayette streets, has been set for 4 P. M. December 7. Full details concerning this building recently mentioned.

Baltimore—Warehouse.—The Gottlieb-Bauernschmidt-Straus Brewing Co., Park avenue and Fayette street, has awarded contract to the Trussed Steel Concrete Co., 612 North Calvert street, for the construction of interior of warehouse located at Central avenue and Fawn street, after plans and specifications by Worthington & Ahrens, architects, 8 East Lexington street. Structure to be three stories high with basement, 63x180 feet; reinforced concrete floors and columns; slag roofing; sanitary plumbing; heating system; elevator; cost to be about \$25,000.

Baltimore—Dwelling.—Dr. George L. Deichmann, Commonwealth Bank Building, Howard and Madison streets, will erect dwelling to be located on Park Heights avenue, after plans and specifications by A. S. Watts, architect, Pikesville, Md. Structure to be two and one-half stories high with basement, 32.11x41.4 feet, with wing 18.6x25.6 feet; stone foundation; frame construction; electric wiring and fixtures; sanitary plumbing; heating system. Burnham & Wells, builders, Builders' Exchange Building, 2 East Lexington street, are estimating on the construction.

Baltimore—Stable.—Bernheimer Bros., 311 West Lexington street, will erect stable to be located at 505 North Paca street, after plans and specifications by Charles E. Cassell & Son, architects, 411 North Charles street. Structure to be two stories high, 29x143 feet, with wing 28x29.2 feet; brick with stone trimmings; concrete foundation; steel girders; slag roofing; galvanized-iron cornice and skylight. Elevator, plumbing, lighting, sidewalk paving and stable fittings not to be included in contract. Plans and specifications are ready for distribution to builders for estimates on construction.

Baltimore—School and Fire-department Buildings.—The municipal Board of Awards, City Hall, invites proposals for the erection of the following buildings: A building for the fire department to be located at corner of Harford avenue and Oliver street. Structure to be two stories high, 48x78.4 feet; Roman brick with granite base and ornamental terra-cotta trimmings; concrete foundation; steel beams and girders; cast-iron columns; tin roofing; vitrified-brick pavement; electric wiring and fixtures; sanitary plumbing; steam-heating system. Two school buildings, one to be located at corner of Ramsay and Pulaski streets and the other at corner of Lakewood avenue and Oliver street, and both to be of the same size and design. Structures to be four stories high, 81.2x157.4 feet; brick with granite base and stone trimmings; concrete foundations; steel beams and girders; cast-iron columns; tin and tile roofing; galvanized-iron cornices; Terrazzo floors; cast-iron stairways with slate treads; gas fixtures; sanitary plumbing; steam fan heating system. The plans and specifications for the above buildings can be seen at the office of the Inspector of Buildings, City Hall. Bids are to be submitted to the office of Harry F. Hooper, city register, City Hall, on or before 11 A. M. December 14. The following builders have received plans and specifications: Frederick Decker & Son, 1209 East Biddle street; R. H. Ford Construction Co., 407 St. Paul street; Henderson & Co., Ltd., 218 West Fayette street; Charles L. Stockhausen, National Marine Bank Building, Gay and Water streets; Henry Smith & Sons Co., 116 South Regeater street; C. Sheehan & Son, 117 East Center street; Murphy Construction Co., 202 West Fayette street, and M. L. Wright, 324 West Biddle street.

Manufacturing Buildings and Other Enterprises.

Baltimore—Oiled Clothing Factory.—The Maryland Oiled Clothing Co. has been incorporated, with an authorized capital stock of \$100,000, for manufacturing oiled clothing, by Leonard H. Weill, 213 North Eutaw street; Louis J. Nathan and Henry Laupheimer, 101 West Pratt street.

Baltimore—Building Equipment and Supplies.—The A. R. Huse Sons' Contracting Co. has been incorporated, with an authorized capital stock of \$10,000, for dealing in building equipment and supplies and conducting a general contracting business, by Adolph R. Huse, Wm. F. Huse and Henry A. Huse, all at 20 East Lexington street; Edgar L. Wade and Frank J. Snyder.

Baltimore—Patternmaking Plant.—Jesse Wilson, 310 North Holliday street, patternmaker, has awarded contract to Monmonier & Sorrell, builders, 308 Laurens street, for the construction of building to be located at 703 and 705 Hillen street, after plans and specifications by Henry J. Tinley, architect, 421 St. Paul street. Structure to be two stories high, 37x70.8 feet; brick with stone trimmings; concrete foundation; steel beams; cast-iron columns; slag roofing; galvanized-iron skylight; gas fixtures; sanitary plumbing; cost to be about \$3000. This building previously mentioned.

Baltimore—Electric Light and Power Plant.—Richard B. Fentress and S. B. Medaury of the Baltimore Refrigerating & Heating Co., 408 South Eutaw street, have obtained a franchise ordinance from the city council empowering them to engage in furnishing

electric-light and power service. As previously stated, it is their intention to invest about \$1,000,000 in the equipment of their plant, and Mr. Fentress previously informed the Manufacturers' Record that they would be in the open market for the necessary machinery.

Baltimore—Boiler-house.—Angus Cameron, Boston and Patuxent streets, will erect boiler-house one story high and 43.4x72 feet, to be located at his chemical plant at Boston and Patuxent streets.

Baltimore—Boiler-house.—Jacob M. Levy, cloth sponger, 649 West Lombard street, has awarded contract to Frank Novak, builder, 800 North Duncan street, for the construction of boiler-house to be located at 651 West Lombard street. Structure to be two stories high, 19x30 feet; brick with stone trimmings; concrete foundation; steel beams; slag roofing; cost to be about \$1500.

Baltimore—Building for Manufacturing Purposes.—A. Nelson Lewis, 1811 Walnut street, Philadelphia, Pa., will erect a large building for manufacturing purposes to be located at 29 and 31 South Charles street. Structure to be about 80x190 feet; steel-frame fireproof construction.

Baltimore—Candy Factory and Boiler-house.—Lauer & Suter, candy manufacturers, 1422 Philpot street, have awarded contract to M. Z. Hammen, builder, 1129 Pierce street, for the construction of factory and boiler-house. Factory to be four stories high, 24x70 feet, and boiler-house one story high, 30x42 feet; brick with stone trimmings; concrete foundation; tin roofing; galvanized-iron skylight; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevator; cost to be about \$6000.

Baltimore—Real Estate.—The St. Paul Realty Co. has been incorporated, with an authorized capital stock of \$10,000, for dealing in real estate, by Wm. Kleinle, 301 St. Paul street; Charles W. Webb, John R. Forsythe, 411 St. Paul street; Walter B. Stevens, 519 West Franklin street, and Harry E. Gilbert, 301 St. Paul street.

Baltimore—Building Materials, etc.—The Kelly & Broadbent Co. has been incorporated, with an authorized capital stock of \$25,000, for dealing in real estate and building materials, by John J. Kelly and John J. Kelly, Jr., both of the National Building Supply Co., Lexington and North streets; Felipe A. Broadbent, Bernard I. Broadbent and Stephen M. Broadbent, all at Canton avenue and President street.

Baltimore—Brick Works.—The United States Brick Co. will build a large brick-manufacturing plant in Baltimore, also in Washington, D. C., and other leading cities. It was organized at Reading, Pa., on December 3 with a capital stock of \$5,800,000, and Albert A. Gery of that city is president. Mr. Gery telegraphs the Manufacturers' Record that \$1,000,000 will be expended in the equipment of the Baltimore plant, which will have an annual capacity of 100,000,000 bricks.

Baltimore—The Sun Building.—The A. S. Abell Publishing Co., southwest corner Calvert and Saratoga streets, proprietors of the Sun, has commissioned Baldwin & Pennington, architects, 311 North Charles street, to prepare plans and specifications for its new publishing plant to be located at southwest corner Baltimore and Charles streets. Structure to be four stories high with basement, 52.9x115 feet; ornate exterior; concrete foundations; fireproof construction throughout; electric wiring and fixtures; sanitary plumbing; steam-heating system; power elevators. A complete modern printing plant and electric generating plant will be installed. Plans and specifications covering the construction of the building will shortly be distributed among builders for estimates. This building previously mentioned.

Subbids Wanted.

Mention of contractors wanting subbids on construction work and material will be found, when published, in the "Machinery Wanted" column on another page under the heading of "Building Equipment and Supplies."

ALABAMA.

Abbeville—Fertilizer Factory and Cottonseed-oil Mill.—Howard Fertilizer Co. will begin at once the remodeling of fertilizer works and installing new machinery. It is also stated the company later contemplates erecting cottonseed-oil mill.

Florence—Machine Shop.—Reports state that the Hoxie-Kells Machine Co. will install machinery for the manufacture of patent guards for railroads.

Birmingham—Publishing.—Advance Publishing Co., recently organized with \$25,000 capital, has purchased the plant of the Kant Printing House, which will be improved and operated. F. M. Jackson is president; F. W.

Dickson, vice-president; J. R. Hornaday, secretary-treasurer, and W. N. Kant, general manager.

Birmingham—Construction Company.—H. A. Stockmar, Emma J. Stockmar and Charles F. Melcher have incorporated the Stockmar Construction Co., with \$5000 capital.

Columbia—Cotton Mill.—A. D. Woods, reported last week as to build a cotton mill, has not completed final arrangements. He plans to organize a stock company, capitalized at probably \$100,000, and is prepared to correspond with mill engineers who may be in a position to become actively interested and assist in forming the company.

Gadsden—Beverage Factory.—Pep-To-Lac Company will erect one-story brick building 25x50 feet, which will be equipped for the manufacture of a beverage known as "Pep-To-Lac." Plant will have a daily capacity of 500 gallons.

Grayton—Cotton Gin.—T. S. Gray will rebuild cotton gin recently reported burned in time for the next crop.

Greenville—Electric-light Plant.—C. C. Henderson contemplates erecting electric-light plant.*

Mobile—Cooperage and Box Factory.—Mobile Cooperage & Box Manufacturing Co. has been organized, with \$30,000 capital, to conduct factory on Three-Mile creek. A. S. Lyons is president; E. D. Ledyard, vice-president; G. E. Aunspaugh, secretary-treasurer, and P. D. Pettus, general manager.

Mobile—Ship Chandlery.—C. H. Costello Chandlery Co. has been incorporated with \$25,000 capital by Christopher H. Costello, John Dorgan and Luis M. Moragues.

Mobile—Boiler Works.—Gulf City Boiler Works has been incorporated, with an authorized capital of \$25,000. W. M. Evans is president; W. T. Hieronymus, secretary-treasurer.

Talladega—Brick Works.—Local parties have purchased the plant and machinery of the Childersburg Brick Co., together with 58 acres of land near Talladega, and have reorganized the company with L. W. Clardy, president; W. P. Glazener, vice-president, and W. R. Brannon, secretary-treasurer. New machinery will be installed and the plant will have a daily capacity of 60,000 bricks; capital \$30,000.

Talladega—Brick Works.—Reports state that the Talladega Brick Co. contemplates installing new machinery for increasing capacity.

ARKANSAS.

Bearden—Telephone System.—Bearden Telephone Co., reported incorporated last week with \$2000 capital, has let contract to S. B. Norris to build telephone line.

Little Rock—Phosphate Plant.—Arkansas Fertilizer Co., reported last week as investigating site through its representative, P. S. Williams, for the establishment of plant to replace one burned at Batesville, Ark., will erect building 120x300 feet and install machinery for an annual capacity of 40,000 tons of phosphate and fertilizers.

Little Rock—Grain Company.—Daniel Grain Co. has been incorporated with Dan Daniel, president and treasurer; D. B. Samuel, vice-president, and B. J. Daniel, secretary.

Little Rock—Heating Plant.—Lewis & Kitchens of Kansas City, Mo., have contract to install heating plant in the Little Rock high-school building; cost \$11,000.

Mulberry—Cottonseed-oil Mill.—Mulberry Cotton Oil Co. has increased capital from \$50,000 to \$30,000.

Springdale—Preserving Plant.—Springdale Preserving Co., reported incorporated last week with \$200,000 capital, is erecting building 60x90 feet, which will be equipped for preserving fruits, etc. A. L. Emery is superintending the construction.*

Vannale—Lumber and Brick Company.—Star Lumber & Brick Co. has been incorporated, with \$125,000 capital. James N. Hall is president; A. N. Schwing, vice-president and treasurer, and T. E. Hare, secretary.

FLORIDA.

Gainesville—Saw-mills, etc.—Reports state that the Suwannee River Producing Co. has purchased 80,000 acres of timber land in Lafayette county and is erecting saw-mills, distilling plants, etc.

Jacksonville—Brick Works.—M. C. Drew, Abraham West, Mr. McDonald, J. A. Davis, G. W. Canfield and others, to manufacture the McDonald patent brick; capital \$20,000.

Jacksonville—Fertilizer Works.—Armour Fertilizer Co. is arranging to begin work on the erection of its proposed fertilizer factory on site recently purchased; factory will have a floor area of 100,000 square feet and an annual capacity of 25,000 tons of fertilizer. Company has already begun building wharf

on the river-front. About \$1,500,000 will be invested.

Jacksonville—Commission Company.—Incorporated: Porter Produce & Commission Co., with \$25,000 capital. Walter T. Porter is president; Benjamin F. Bowen, vice-president; Charles W. Bartleson, treasurer, and W. A. Hagood, secretary.

Jacksonville—Wire-spring and Mattress Factory.—Florida Spring Bed Manufacturing Co. has been incorporated, with \$10,000 capital, to manufacture wire springs of all kinds, mattresses, etc. F. H. Elmore is president; J. C. Connally, vice-president and general manager, and J. C. Russell, secretary-treasurer.

Live Oak—Hardwood Factory.—Reports state that Thomas W. Lutz and Harry Blackburn are erecting hardwood factory.

Ocala—Foundry and Machine Shop.—N. Harrison is erecting building which will be equipped as foundry and machine shop.

Pensacola—Water-works.—Chas. H. Bliss & Co. is the name of company reported last week as being organized to construct and operate works. About \$200,000 will be invested, and plant will have a daily capacity of 6,000,000 gallons of water.*

Tampa—Mercantile.—Wolf & Jacobs Co. has been incorporated, with \$25,000 capital. E. W. Wiggins is president; C. O. Burts, vice-president, and L. S. Wolf, secretary-treasurer.

GEORGIA.

Atlanta—Publishing.—Chartered: Atlanta Medical Journal Co., by Miller B. Hutchins, Bernard Wolff and Marlon Hilmyer Wolff, with \$3000 capital, to consolidate the Atlanta Medical and Surgical Journal and the Atlanta Journal of Medicine.

Atlanta—Iron Company.—K. Koplin, S. M. Samuels and W. D. Ellis, Jr., have incorporated the Koplin Iron Co., with \$10,000 capital.

Atlanta—Cigar Company.—Chartered: Southern Cigar Co., with \$5000 capital, by F. B. Jamison and E. W. Hallowell.

Cordele—Grist Mill.—It is reported that Perry C. Clegg is erecting steam milling plant with a daily capacity of 500 bushels of meal.

Dallas—Electric-light Plant and Water-works.—Dallas Light & Power Co. has been organized, with \$5000 capital, to construct electric-light plant and water-works. A. J. Cooper is president, and E. H. Robertson, secretary-treasurer.

Dublin—Cotton Mill.—It is reported that the Dublin Cotton Mills will add 100 looms.

Fitzgerald—Water-works and Electric-light Plant.—City will vote December 20 on \$15,000 bond issue, previously reported, for improving water-works and electric-light plant. Thomas Wilson is mayor.

Griffin—Sewerage, Water-works, etc.—J. H. McKenzie & Sons, Augusta, Ga., have contract to construct proposed sewers, lay water pipes, etc. About \$30,000 will be expended.

Hampton—Cotton Gin.—Mitcham & Wynn will next summer rebuild cotton gin recently burned at a loss of \$3000.

Macon—Handle Factory.—Arthur De Lapierre has secured site on which to erect hardwood handle factory.

Newnan—Cotton Mill.—The Newnan Cotton Mills will erect an additional building and install 8000 spindles; present equipment, 17,500 ring spindles. R. D. Cole Manufacturing Co. has contract to erect building 50x100 feet.

Savannah—Wood Distillation.—It is rumored that New York parties represented by J. Frankel and N. H. Rothschild of New York, N. Y., have secured site on the river-front on which to erect plant for refining wood spirits of turpentine.

Tifton—Gathering Crude Gum.—Wire Virgin Gum Co. has been incorporated, with \$10,000 capital, and privilege of increasing to \$50,000, by H. H. Tift, E. L. Vickers, J. W. Spurlock and J. W. Kennedy, to operate certain devices patented by Messrs. Spurlock and Kennedy for gathering crude gum.

Waynesboro—Mercantile.—Inez W. Jones and Sidney C. Jones have incorporated the William E. Jones Co., with \$50,000 capital.

KENTUCKY.

Burgin—Distillery.—Incorporated: Dowling Bros. (established), with \$2000 capital, by Michael Dowling and associates.

Louisville—Transportation Company.—Incorporated: Cumberland & Tennessee Transportation Co., with \$40,000 capital, to operate steamboats on the Ohio and Mississippi rivers, by Leonard McCabe, L. H. Wymond and C. M. Pate.

Louisville—Hat Factory.—Williams Hat Manufacturing Co. has been incorporated,

with \$15,000 capital, by K. V. Williams, C. D. Chick of Beaver Dam, Ky.; George J. Strobel and J. W. Jones of New Albany, Ind.

Owensboro—Wagon Factory.—J. H. Hickman and associates, reported last week under Paducah, Ky., contemplate organizing company for the establishment of wagon works in Owensboro.

White Plains—Flour Mill.—Geo. H. Johnson, P. B. Ross and associates have organized the Hope Milling Co.

LOUISIANA.

New Iberia—Paving.—Foulkes-Forbes Company, Terre Haute, Ind., has contract at \$38,000 for proposed concrete sidewalk and curbing.

New Orleans—Tannery.—Reports state that E. G. Steinke and C. M. Walter of Milwaukee, Wis., are organizing \$200,000 company for the establishment of tannery. Site has been secured and building will be erected at once.

New Orleans—Malt-extract Factory.—Reports state E. S. Maynard of the Gerke Brewing Co., Cincinnati, Ohio, is investigating with a view to establishing branch plant for the manufacture of malt extract.

New Orleans—Gas Plant.—Pintsch Compressing Co. of New York, N. Y., contemplates erecting gas plant.

New Orleans—Oyster Cultivation.—Conaway Oyster Co., Ltd., has incorporated, with \$14,000 capital, to cultivate and develop oyster beds. Charles Post is president; Thomas Wilson, vice-president and treasurer, and William A. Burgess, secretary.

New Orleans—Flour Mill.—New Orleans Milling Co. has been organized, with \$125,000 capital, and C. E. Williams of Franklin, Ohio, president; Rufus E. Foster, vice-president, and G. M. Ahrons, secretary-treasurer (both of New Orleans). Company has secured site and let contract to Oliver, Sallett & Co. of New Orleans and Chicago, Ill., for the erection of mill building, after plans by Mackenzie & Torre; offices 423 Natchez street and 323-325 Board of Trade Building Place. (Mr. Franklin was reported in October as investigating site for the erection of flour mill.)

Seale—Lumber Mill.—John A. Wilken is engineer in charge of construction of lumber mill previously reported under Lake Charles, La., as being built by the Midway Lumber Co., Ltd.; A. B. Seale, president. The plant will have a daily capacity of 40,000 feet of lumber and cost \$25,000.

West Baton Rouge Parish—Saw-mill.—Reports state that H. T. and L. T. Molley of Chicago, Ill., and Rochester, N. Y., will erect saw-mill for the development of 20,000 acres of cypress timber land in Baton Rouge parish. J. M. Buchanan of New Orleans, La., will be manager.

MARYLAND.

Havre de Grace—Sewerage System.—Ajax Construction Co., Pittsburg, Pa., is the lowest bidder at \$16,568.55 for the construction of sewerage system previously reported.

Stevenson—Mercantile.—John F. Hilgeman, Lawrence Hilgeman and associates have incorporated the Hilgeman Brundige Company with \$15,000 capital.

MISSISSIPPI.

Bay Springs—Timber Company.—Oliver McAvoy Timber Co. has been incorporated, with \$25,000 capital.

Gunnison—Artesian Well.—Town has let contract to W. H. Baird to drill an artesian well for furnishing town with water.

Indianola—Lumber and Manufacturing Company.—Chartered: Bone Lumber & Manufacturing Co., with \$25,000 capital.

Long Beach—Syrup and Canning Factory.—Reports state that W. J. Quarles, H. Quarles, I. D. Toomer and J. J. Bailey contemplate establishing plant to manufacture and can cane syrup and can sweet potatoes.

Long Beach—Cooperage.—It is reported that I. D. Toomer is establishing plant for the manufacture of slack barrels near Long Beach.

Mathiston—Door, Sash and Blind Factory.—Reports state that J. L. Denton of Eupora, Miss., has secured site on which to erect door, sash and blind factory.

Oxford—Electric-light Plant.—City will construct electric-light plant and bids are asked until December 5. R. S. Adams is mayor.*

Saratoga—Saw-mill.—Saratoga Lumber Co., operating planing mill, is arranging for the installation of saw-mill.

Saratoga—Bottling Works.—Saratoga Bottling Works is expending \$5000 in improvements to plant for increasing facilities.

Silver Creek—Beverage Factory and Ice

Plant.—J. C. Jarvis of Hattiesburg, Miss., and J. M. Standard of South Carolina have let contract to Gilmore & Culey for the erection of building to be equipped as soda-pop factory; later machinery will be installed for the manufacture of ice.

West Point—Steam Laundry.—Incorporated: Empire Steam Laundry, with \$6000 capital.

West Point—Realty Company.—Union Realty & Investment Co. has been incorporated, with \$25,000 capital.

Wingate—Saw-mill.—It is reported that Small Bros. will rebuild saw-mill recently burned.

Yazoo City—Saw-mills.—It is reported that Theodore Raven, L. B. Hollemat, Charles Goest, Joe Hartlein, S. G. Howard, Chas. G. Dieterle, George Weckesser and associates of Mt. Vernon, Ind., are investigating a tract of 100,000 acres of timber land near Yazoo City with a view to purchasing. If deal is consummated, saw-mills will be erected at once for developing the land.

MISSOURI.

Birmingham—Brick Works.—Witthoff Brick Co., reported incorporated last week with \$30,000 capital, has purchased plant from the Kansas City Shale Brick Co., and will have a daily capacity of 20,000 bricks. George Witthoff is president, and N. Hardwicke, manager.*

Doniphan—Light, Ice and Manufacturing Company.—Doniphan Light, Ice & Manufacturing Co. has been incorporated, with \$25,000 capital, by F. Meech, P. D. Hartel and G. W. Wheelock.

Joplin—Glove Factory.—National Mitten Works, Kokomo, Ind., states there is no truth in the report mentioned last week that it contemplates establishing branch factory at Joplin.

Kansas City—Land and Immigration Company.—Martin Gaudin, S. G. Warner and J. H. White have incorporated the Kansas City & Southern Land & Immigration Co., with \$10,000 capital.

Kansas City—Mining Company.—Incorporated: La Honda Mining Co., with \$40,000 capital, by W. M. Scott, Frank J. Irwin and C. W. Lake.

Mexico—Gas Plant.—City has granted franchise to William McCabe to construct and operate gas plant.

Mokane—Pipe Factory.—It is reported that G. S. Creed will establish plant for the manufacture of hickory and cob pipes, having a daily capacity of 10,000.

Springfield—Canning and Packing Association.—A. J. Oliver, A. W. Lyon and M. C. Barnes have incorporated the National Co-operative Canning and Packing Association, with \$10,000 capital.

St. Joseph—Cold storage Distribution.—St. Joseph Artesian Ice & Cold Storage Co. has applied for franchise to lay pipes through the streets for refrigerating purposes. About \$20,000 will be expended.

St. Joseph—Curing Plant.—It is reported that C. M. Kresge of Pittsburg, Pa., is investigating site for the establishment of plant to cure sausage, lard and fancy meat preparations.

St. Joseph—Power-house.—Board of Public Works has awarded contract to Warner Bros. at \$13,291 for the erection of proposed electric power-house.

St. Louis—Manufacturing Company.—Universal Manufacturing Co. has been incorporated, with \$50,000 capital, by George S. Marshall, R. Marshall and associates.

St. Louis—Publishing.—George H. Flite, Thomas L. Cannon and Zachariah W. Cannon have incorporated the American Publishing Co. with \$10,000 capital.

St. Louis—Grocery.—C. W. Mueller Grocer Co. has been incorporated, with \$5000 capital, by Charles L. Mueller and others.

St. Louis—Electrical-machinery Works.—Security Electric Heating & Power Co. has been incorporated, with \$30,000 capital, by S. D. Winter, Dudley S. Wazley, Harry M. Hill, Robert E. Williams and S. T. Price, to manufacture and develop electric devices for lighting, heating and power. Company will arrange at once for the erection of factory building.

St. Louis—Fuel Company.—J. H. Adelsberger, E. W. Banister and Julius C. Muren have incorporated the Easton Avenue Fuel Co. with \$10,000 capital.

St. Louis—Car Seals.—Security Car Seal Co. has incorporated, with \$15,000 capital, to manufacture car seals; incorporators, S. A. Brown, T. G. Ratcliffe and W. F. Westcott.

St. Louis—Vehicle Works.—Incorporated: G. H. Kanke, E. Kanke and F. A. Bender have incorporated the Victor Carriage & Wagon Co. with \$5000 capital.

St. Louis—Feed Mill.—Commonwealth Feed Mills Co. has been incorporated, with \$6000 capital, by Samuel N. Long, Jacob B. Ulrich and Robert G. Jordan, to manufacture dairy food.

St. Louis—Storm Shield.—Charles H. Harvey, D. R. Fox and M. A. Harvey have incorporated the American Storm Shield Co., with \$50,000 capital, to manufacture and sell storm shields for vehicles.

St. Louis—Vehicle Company.—Capen Motor Car Co. has been incorporated, with \$15,000 capital, by Geo. H. Capen, Wallace C. Capen and Samuel D. Capen, to deal in self-propelling vehicles.

St. Louis—Cloak and Suit Factory.—Frelich Cloak & Suit Co. has incorporated, with \$37,000 capital, to manufacture and deal in ladies' suits, cloaks and skirts; incorporators, Samuel Frelich, Jacob Godlove, Samuel Pasternak, A. Frelich and P. W. Haberman.

St. Louis—Incinerators.—Board of Public Improvements has secured site about five miles from the city limits on which to erect proposed incinerating plants; three buildings will be erected at a cost of \$50,000, and together they will be equipped for a daily reduction capacity of 400 tons.

St. Louis—Dental Company.—A. W. McLaurine, H. M. Higley and L. T. Creighton have incorporated the Crown Dental Co., with \$2000 capital.

St. Louis—Telephone Building.—Kinlock Telephone Co. is having plans prepared by Widmann, Walsh & Boisselier, Wainwright Building, for eight-story fireproof building reported last week to be erected; cost \$400,000.

St. Louis—Orchard Company.—Arkansas Orchard Planting Co. has been incorporated, with \$10,000 capital, by H. C. Towson, James M. Patterson, Thomas H. Cobbs and associates.

Webb City—Manufacturing—Incorporated: Carrie Cole Manufacturing Co., with \$18,000 capital, by Carrie Cole, Harry Tamblin, R. E. Sanford and associates.

NORTH CAROLINA.

Ashboro—Copper Mining.—Chartered: Ashboro Copper Mining Co., with an authorized capital of \$100,000, by W. L. Thurber, A. J. Thurber, D. M. Holliday, M. W. Parrish, all of Ashboro; H. D. Sanders of Putney, N. Y., and S. M. Bradley of Morehead, Ky. Company will begin at once the development of copper ore vein; a shaft 72 feet deep has already been sunk.

Asheville—Electric-light Plant.—City contemplates the establishment of electric-light plant, and it is probable that the old pumping station will be improved and equipped for this purpose. Address The Mayor.

Aurora—Manufacturing.—Aurora Manufacturing Co. has been incorporated with an authorized capital of \$25,000 by R. L. Jones, M. B. Williams, B. H. Thompson and associates.

Coleridge—Cotton Mill.—The Enterprise Manufacturing Co. has been incorporated, with capital stock of \$100,000, by Robert L. Caviness of Coleridge, Daniel H. Lambert of Coles Store, N. C., and John M. Caviness of Moffitt, N. C. It will take over and operate an established mill of 4624 spindles, etc.

Durham—Gas-plant Improvements.—Reports state that the Durham Light & Power Co. contemplates making extensive improvements to its plant. It is also stated that the company intends establishing another gas plant at some point in North Carolina, probably Goldsboro.

Durham—Electric-power Plant.—The plans of the newly-chartered Raleigh-Durham Passenger & Power Co. (with a capital stock of \$600,000) include the erection of a plant for supplying electricity for motive power to railways, factories and other industrial enterprises within a radius of many miles. This plant will be located between Raleigh and Durham. It is also contemplated to build electric-light and ice plants in Durham. Thos. Staples Fuller of Raleigh, N. C., is one of the leading incorporators.

Graham—Cotton Mill.—The Travora Manufacturing Co. has installed 100 additional looms.

Graham—Cotton Mill.—The Voorhees Manufacturing Co. has contracted for carding and spinning machinery. It has heretofore been operating 136 looms.

Greensboro—Building-block Factory.—S. N. Peters contemplates establishing plant for the manufacture of hollow cement building blocks.

Greensboro—Gold-mining.—Dr. J. M. W. Flint and associates have begun the development of the Hill gold mine.

Greensboro—Telephone Exchange.—W. C. Bain has contract at \$14,920 for the erection of telephone exchange for the Southern Bell

Telephone & Telegraph Co., reported last week. Harry N. Tyler prepared the plans.

High Point—Glass-mirror Factory.—Pittsburg Plate Glass Co., Broadway and Court street, Cincinnati, Ohio, will establish branch plant for the manufacture of mirrors. A one-story building 125x180 feet is being erected. John T. Morris is contractor.

High Point—Knitting Mill.—The Centaur Knitting Co. has been organized and will establish knitting mill. Contract for buildings has been awarded.

Holbrook—Real Estate.—Chartered: Real Estate & Investment Co., by A. C. Davis, W. K. Williams, W. P. White and F. A. Ruffin; capital \$3500.

Madison County—Timber Land.—It is reported that Joseph B. O'Brien of Albany, N. Y., has purchased 38,500 acres of timber land in Madison county.

Mitchell County—Timber-land Development.—Bryan Lumber Co., Bristol, Tenn., has purchased a large tract of timber land in Mitchell county and will erect at once a portable saw-mill for developing same.

Mt. Airy—Jewelry Company.—Mt. Airy Jewelry Co. has been incorporated, with an authorized capital of \$25,000, by H. C. Cooper and others.

Noland—Lumber Company.—C. D. Fuller and others have incorporated the Walverene Lumber Co., with \$25,000 capital.

Raleigh—Electric-light and Power Plant.—Trustees of Agricultural and Mechanical College contemplate installing plant for furnishing light, heat and power.

Raleigh—Candy Factory.—Chartered: Porter Candy Co., with an authorized capital of \$25,000, by R. L. Rand, C. D. Porter, W. H. Rand, D. M. Campbell and associates, to manufacture candy, etc.; office 103 West Martin street.

Wilmington—Publishing.—Chartered: Independent Publishing Co., with an authorized capital of \$10,000, by J. H. Gore, Jr., Jas. W. Sneed and George Garlis. Mr. Gore was reported last week as organizing company to publish daily paper.

Wilmington—Saw-mill.—Weed Distilling Co. is erecting saw-mill with a daily capacity of 60,000 feet.

SOUTH CAROLINA.

Batesburg—Hardware Company.—R. S. Simmons and C. M. Rhodes have incorporated the Batesburg Hardware & Supply Co.

Beaufort—Telephone System.—People's Telephone Co. is extending its line through Beaufort county.

Clinton—Water-works.—Chas. C. Wilson, C. E., 1302 Main street, Columbia, S. C., is preparing plans for water-works, for which bonds were previously reported voted. Bids for construction will be received about January 1.

Conway—Broom Factory.—Atlantic Broom Works will be organized with Charles H. Sulder, president, for the establishment of broom factory.

Greens.—Chartered: Wood-Mendenhall Company, by J. T. Wood, J. B. Mendenhall, L. A. Stone, J. V. Smith and Frank Burgess.

Wadalla—Water-power-Electrical Plant.—Oconee Water, Light & Power Co., reported incorporated last month for the development of water-power and the erection of electric plant to transmit said power, has completed organization with J. A. Steck, president; C. G. Jaynes, vice-president, and James Thompson, secretary-treasurer.

Williston—Knitting Mill.—E. C. Smith of Edgefield, S. C., will establish a knitting mill at Williston, installing 25 and possibly 50 machines; will operate by water-power. Machinery has not been purchased.*

Timmonsville—Woodenware Factory.—W. P. Henry is establishing plant for the manufacture of wooden butter and lard dishes. Machinery is being installed for a daily capacity of 75,000 dishes per day.

TENNESSEE.

Bellbuckle—Steam Laundry.—It is reported that W. F. Blyns will establish steam laundry.

Bristol—Iron Furnaces.—It is rumored that the Virginia Iron, Coal & Coke Co. is making arrangements to put a number of its iron furnaces in blast.

Chattanooga—Ice Plant.—Ward Ice Co. has been organized, with \$75,000 capital, and M. H. Ward, president; A. A. Stong, secretary-treasurer. Company has secured site on which to erect building at a cost of \$40,000, which will be equipped for a daily capacity of 50 tons.

Clarksville—Iron Furnace.—Reports state that the Red River Iron Co., Graham MacFarlane, president, is preparing to put the Helen iron furnace in blast at an early date.

Knoxville—Barytes Mill.—G. E. Smith, 2118 Jackson avenue, contemplates erecting mill for manufacturing water-floated barytes.*

La Follette—Water-works, Electric-light Plant and Ice Factory.—La Follette Public Utilities Co., 953 North Pennsylvania street, Indianapolis, Ind., will construct water-works, electric-light plant and ice factory. About \$100,000 will be invested.

Memphis—Car Shops.—It is reported that the St. Louis & San Francisco Railroad Co. will rebuild car shops reported burned last week at a loss of \$40,000. C. D. Purdon, St. Louis, Mo., is chief engineer.

Memphis—Furniture Company.—W. S. Murphy, C. W. Murphy, C. P. Bowker and associates have incorporated the Murphy Furniture Co., with \$3500 capital.

Memphis—Brewery and Ice Plant.—It is reported that James Kinnane is erecting 50,000-barrel brewing plant, and contemplates building 50-ton ice-making plant also.

Nashville—Rug Mill.—Fowler & Lawler of Little Rock, Ark., will establish the Nashville Carpet Cleaning and Rug Manufactory, investing about \$10,000. Looms will be installed for rug weaving and plant for cleaning carpets.

Nashville—Timber and Mineral Land.—Chartered: Southern Timber & Mineral Land Co., with \$100,000 capital, by A. M. Shook, A. W. Wills, S. A. Champion, Benton McMillan and associates, to acquire and develop timber and mineral lands.

Nashville—Mercantile.—J. G. Kirkpatrick and associates have incorporated the North Nashville Mercantile Co., with \$5000 capital.

Nashville—Snuff Factory.—Reports state that Parker Campbell and H. H. Grizzard contemplate organizing \$150,000 company for the establishment of snuff factory.

Richmond—Metal Works.—It is reported that the Frictionless Metal Co., Richmond, Va., contemplates removing plant to Chattanooga, and is investigating site on which to erect factory building. C. E. Buek is president.

Rogersville.—Incorporated: G. D. Hale Co., with \$3500 capital, by G. D. Hale, Minnie Hale, I. E. Shanks, H. B. Clay, Jr., and W. P. Armstrong.

Tullahoma—Canning Factory.—Reports state that S. S. Blackman is organizing company to establish canning factory.

Whiteville—Supply Company.—T. R. Hazlewood, W. H. Newson, J. T. Michaels, W. T. Thompson and R. M. Coffey have incorporated the Whiteville Supply Co.

TEXAS.

Alvarado—Cotton Gin.—Cal E. Kerr, J. J. Hamilton and S. M. Kerr of Corsicana, Texas, have incorporated the Farmers' Custom Gin, with \$10,000 capital.

Beaumont—Oil Wells.—Romero Oil Co. has incorporated, with \$5000 capital, to drill for oil; incorporators, W. T. Campbell, W. F. Blyson, C. Hirsch and L. A. Carlton.

Beaumont—Oil Wells.—Incorporated: Lady Tom Oil Co., with \$2500 capital, by W. L. Douglas, George C. Greer and F. J. Duff, to drill for oil.

Beaumont—Mining and Refining.—Chartered: General Refining Co., with \$1,000,000 capital, to conduct a mining and refining business; incorporators, T. H. Bass, E. F. Sims of Beaumont, S. F. Carnes, F. G. Jones, C. H. Raine of Memphis, Tenn.; S. F. Beckstein and J. H. Smedley of Detroit, Mich.

Beeville—Ice and Refrigerating Plant.—The Fred W. Wolf Company, Chicago, Ill., is engineer in charge of construction of ice and refrigerating plant previously reported as being built by W. F. Baldwin of San Antonio, Texas, and S. S. Langley of New Haven, Conn., which will be operated as the Beeville Ice Co. Plant will have a 25-ton ice-melting capacity.

Brownwood—Saddlery and Harness Factory.—Hurlburt-Jackson-Hughes Company has been incorporated, with \$100,000 capital, by B. E. Hurlburt, Felix Jackson and Ed. S. Hughes, to manufacture saddles, harness, implements, etc.

Burnet—Cotton Gin.—G. W. Bishop will rebuild cotton gin recently reported burned. About \$5000 will be invested.*

Clarksville—Water-works.—A. B. Sanders has contract for construction of the water-works previously reported.

Cleburne—Hardware Company.—Randle Hardware Co. has been incorporated, with \$10,000 capital, by S. B. Norwood, C. T. Randle and G. B. Randle.

Dallas—Mercantile.—W. D. Garlington and associates have incorporated as M. D. Garlington & Co. with \$50,000 capital.

Dallas—Milling Company.—Republic Milling Co. has increased capital from \$50,000 to \$75,000.

Dallas—Hardware.—Huey & Philip Hardware Co. has increased capital from \$200,000 to \$300,000.

El Paso—Manufacturing Plant.—Reports state that a company is being organized to establish plant for the manufacture of window-screen and awning holders invented by Wilhelm Y. Wolf, 303 North El Paso street, who is also interested in the company.

El Paso—Sewerage System.—Abilene Sewer Co. has incorporated, with \$25,000 capital, to install system of sewers; incorporators, J. E. Grayson, R. D. and W. W. Richey.

Fort Worth—Cement Plant.—D. H. McDonnell contemplates establishing plant for the manufacture of cement and plaster of paris. Address P. O. Box 845.

Fort Worth—Coal Company.—W. F. Stewart and associates have incorporated the Stewart Coal Co., with \$10,000 capital.

Houston—Oil Wells.—Incorporated: Long Shot Oil Co. has been incorporated, with \$20,000 capital, by Howard R. Hughes of Houston, J. D. Crawford of Marshall, Texas; Ben Taber and J. R. Sharp of Dallas, Texas, to prospect for oil.

Houston—Oil Wells.—B. W. Armstrong, C. B. Ross of Houston, P. M. Granberry, H. T. Stalti and Chas. F. Schmidt of Indianapolis, Ind., have organized the Jordan Gurley Oil Co., with \$100,000 capital.

Humble—Electric Plant.—Humble Electric Co. has been incorporated, with \$30,000 capital, by J. C. Wilson, F. A. Peters and F. D. Lyon of Houston, to supply heat, light and power.

Matador—Mercantile.—Western Supply Co. has been incorporated by W. W. Crawford and others, with \$5000 capital.

Maypearl—Mercantile.—Incorporated: Durham & Hughes Co., with \$8000 capital, by S. W. Durham and associates.

Paris—Mercantile.—J. D. House and associates have incorporated the J. D. House Company with \$25,000 capital.

San Antonio—Steam Laundry.—C. F. Masch, T. Walker and F. E. Kempman have incorporated the San Antonio Steam Laundry Co., with \$18,000 capital.

San Antonio—Cotton Mill.—The Business Men's Club is corresponding with Edward J. Maher of New Haven, Conn., who claims to represent New England mill men seeking location in the South to which to remove a cotton mill.

Sherman—Creamery.—It is reported that a creamery will be established, and R. E. Smith is interested.

Uvalde—Electric Light Plant.—Reports state that A. M. Fisher of Waco, Texas, will install electric-light plant.

Uvalde—Irrigation System.—B. F. Wilson, C. O. Baughman and W. W. Collier have incorporated the B. F. Wilson Farm & Irrigation Co., with \$2000 capital, to conduct a system of irrigation.

Victoria—Molasses and Sugar Mill.—Victoria Manufacturing Co. is arranging for the erection of molasses mill at its plant; company also contemplates the erection of sugar mill later. J. J. Welder is president.

Waxahachie—Live-stock Company.—Conde Moseley Company has been incorporated, with \$5000 capital, to deal in live-stock, by Conde Moseley, T. F. Thompson and D. H. Thompson.

VIRGINIA.

Alexandria—Realty Corporation.—Incorporated: Linwood Heights Realty Corporation, with an authorized capital of \$50,000, and John W. Glennan, president; Frank S. Appelman, vice-president, and West Steever, secretary, all of Washington, D. C.

Charlottesville—Ginseng Culture.—Virginia Ginseng Co. has incorporated, with \$100,000 capital, to raise ginseng. J. H. Lindsay is president; John S. White, vice-president; W. F. Long, secretary, and J. C. McKennie, treasurer.

Crewe—Laundry.—Edward & John Cole are erecting laundry.

Emporia.—Incorporated: Beman Manufacturing Co., with \$50,000 capital, and E. A. Beman, president; John Colston, vice-president (both of Binghamton, N. Y.), and C. W. Beman, Emporia, secretary-treasurer.

Manchester—Bottle Works.—John Blair, Harrison Blair, John Farland, Percy S. Boshier and associates have organized \$50,000 company and will establish plant for the manufacture of glass bottles. Later company contemplates manufacturing window glass.

Martinsville—Box Factory.—Piedmont Box Co. has been incorporated with an authorized capital of \$10,000. W. L. Clement of Cheraw, S. C., is president; J. P. Swanson of Danville, Va., vice-president, and C. J. Angle, Martinsville, secretary-treasurer; daily capacity 10,000 tobacco boxes.

Norfolk—Towing Company.—Marshall Towing Co. has incorporated, with Joseph F. Marshall, president, and Richard M. Marshall, secretary-treasurer (both of Berkley, Va.); capital \$5000 to \$25,000.

Norfolk—Street Paving.—Southern Contracting Co. has contract at \$2.06 a square yard for paving a portion of Granby street, for which the city council was previously reported as having made an appropriation of \$38,000.

Norfolk—Skating Rink.—J. H. Pierce has the contract to build skating rink reported last week, after plans by Arnold Eberhard; building to be 300 feet in circumference and be known as "The Iceum"; capital \$40,000. W. T. Anderson is president.

Norfolk—Automobile Company.—Virginia Automobile Co. has been incorporated, with \$10,000 capital, to manufacture and deal in automobiles, establish automobile lines, etc. Moses G. Nusbbaum is president; James W. McCarrick, vice-president; J. Roy Collins, secretary, and J. J. Hennelly, treasurer.

Pennington Gap—Coal Mines.—Pocket Coal Co. has been incorporated, with Robert Easter of Pineville, Ky., president, and H. W. Horr of Middlesboro, Ky., treasurer; capital \$10,000.

Portsmouth—Water works.—It is reported that the American Water-Works & Guarantee Co. of Pittsburgh, Pa., has acquired the plant of the Portsmouth, Suffolk & Berkley Water-Works Co., which supplies Portsmouth, Suffolk and Berkley with water. About \$1,300,000 is involved.

Pulaski—Bottling Works.—Reports state that the Radford Ice Co. will install bottling works.

Richmond—Printing Plant.—L. H. Jenkins and associates have purchased the plant of the J. L. Hill Printing Co. and organized the Hermitage Press with L. H. Jenkins, president, and L. Howard Jenkins, secretary-treasurer, to operate the plant; capital \$50,000.

Richmond—Leaf Tobacco.—Chartered: Jas. N. Boyd & Co., with \$200,000 capital, to deal in leaf tobacco. James N. Boyd is president; Richard E. Boyd, vice-president, and Walter H. P. Morris, secretary-treasurer.

Suffolk—Peanut Plant.—McConky Peanut Co. has incorporated, with \$10,000 capital, to prepare peanuts for market, etc. Edward Dawes McConky of Baltimore, Md., is president; John Robert Cockey of Suffolk, secretary-treasurer.

Trevilian—Copper and Sulphur Mines, etc. L. Hilder of Lasky, Va., is developing the sulphur mines reported last week, also copper pyrites and manganese lands, and additional machinery will probably be purchased in the near future. He has contracted with Italian capitalists for the opening of marble quarries on the lands he controls.*

WEST VIRGINIA.

Beckley—Electric power Plants.—John W. McCreary, Thomas H. Wickham, Thomas H. Lanig and associates have incorporated the Beckley Electric Light & Power Co., with \$25,000 capital, to construct and operate electrical power plants, etc.

Buckeye—Whip Factory.—It is reported that Ed Ray, Edgar Aldridge and Owen Kellison contemplate establishment of whip factory.

Charleston—Mercantile.—William A. Mucklow and associates have incorporated the Knickerbocker Supply Co., with \$50,000 capital.

Charleston—Coal-mining.—Incorporated: Knickerbocker Coal Co. has been incorporated by C. W. Morton, William A. Mucklow and associates for the development of coal mines in Kanawha county; daily capacity, 1500 tons. About \$500,000 will be invested.*

Clarksburg—Oil and Gas Wells.—Buena Oil & Gas Co. has incorporated, with \$50,000 capital, to drill for oil, gas, etc.; incorporators, E. O. Twigs, H. Miller McClune, C. D. Piercol, Homer M. Heavener and James G. G. Heavener.

Clarksburg—Water works.—Reports state that city will drill wells for furnishing additional water supply. Address The Mayor.

Fairmont—Coal-mining.—Chartered: Buckhannon River Coal Co., by A. D. Simon, J. A. Jamison, C. W. Arnett and George W. Alexander, for the development of coal mines in Upshur county; capital \$250,000.

Mason City—Iron and Steel Works.—Kenton Iron & Steel Co., reported last week as to erect iron and steel plant, has let contract to Jas. W. Arnold for the erection of frame building 50x400 feet, with corrugated sheet-iron roofing and siding. Daily capacity will be 40 tons of merchant iron and steel.*

Morgantown—Electric Light Plant.—Reports state that Prof. C. R. Jones is preparing pre-

liminary plans for proposed municipal electric-light plant to be built at a cost of \$31,600.

Sistersville—Oil and Gas Wells.—Rankin Gas Co. has been incorporated, with \$50,000 capital, to drill for oil and gas, by A. Bruner, D. E. Thoenen, G. B. West and associates.

Wheeling—Real Estate.—Incorporated: Hesse & Kirchner, with \$25,000 capital, by Harry L. Hesse, Edmund M. Kirchner, Geo. Hesse, Jr., Herman Serig and William P. Robinson.

Wheeling—Gas Company.—Rich Gas Co. will hold a meeting December 29 at office, Board of Trade Building, to consider increasing capital stock.

OKLAHOMA TERRITORY.

Altus—Grain and Fuel Company.—G. R. Thrush, J. L. Meeks and J. T. Parks have incorporated the Farmers' Union Grain & Fuel Co. with \$5000 capital.

Anadarko—Oil and Gas Wells.—L. W. Myers, W. F. Detrich, Guy R. Gelmet and associates have incorporated the Anadarko Oil & Gas Co., with \$50,000 capital, to drill for oil and gas.

Arapaho—Coal-mining.—A company has been organized with G. B. McFarland, president; S. C. Cosner, vice-president, and C. W. Brewer, secretary-treasurer, to develop an eight-foot vein of coal recently discovered.

Guthrie—Flour Purifying.—Electric Catalytic Air Co. of Guthrie and St. Louis, Mo., has been incorporated, with \$100,000 capital, by John M. and Albert M. Williams, John M. Cotteral and C. G. Horner, all of Guthrie, to purify flour.

Lawton—Smelting Plant.—It is proposed to build a large smelter, and William Bruce of Lawton and A. Lewis Hunter of St. Louis, Mo., are interested.

Oklahoma City—Mercantile.—Victor H. Boettcher and others have incorporated the Boettcher-Lillard Dry Goods Co., with \$10,000 capital.

Oklahoma City—Machine and Supply Company.—Incorporated: Southwestern Machine & Supply Co., with \$50,000 capital, by James A. Tobin, John Gibbons, L. J. Hamilton and others.

Oklahoma City—Macaroni Factory.—It is reported that Luisa Servente of New Orleans, La., is investigating site for the establishment of macaroni factory.

Shawnee—Trading Company.—Brown Trading Co. has been incorporated, with \$20,000 capital, by J. I. Holcomb, C. W. Grimwood, R. F. King and Joe Weatherly.

BURNED.

Bedford City, Va.—Flour mill owned by W. A. Falconer and operated by E. A. Fisher; loss \$5000.

Chase City, Va.—Chase City Manufacturing Co.'s buggy works; loss \$30,000.

Clarksburg, W. Va.—A. D. Parr Lumbar Co.'s plant; loss \$50,000.

Garrisonville, Va.—J. R. and James S. Garrison's blacksmith and wheelwright shop.

Hamlet, N. C.—Maple Shade Inn; loss \$6000.

Hickory, N. C.—Hickory Collar Co.'s factory; loss \$6000.

Houston, Texas.—South Texas Grain Co.'s elevator; loss \$130,000.

Houston, Miss.—Machinery building of the International Handle Factory; loss \$100,000.

Hyde, Ga.—D. S. Standard's cotton gin.

Joplin, Mo.—Municipal electric-light plant; loss \$50,000. Address The Mayor.

Kansas City, Mo.—Saw-mill of Penrod Walnut Corporation, Alex. Lendrum, secretary; loss \$23,000.

Madisonville, Fla.—High-school building; loss \$2000. Address The Mayor.

Mayo, Fla.—J. A. Clark's turpentine still.

New Orleans, La.—Swiss Steam Laundry Co.'s plant; loss \$40,000.

Pulaski, Tenn.—M. Patterson & Bro.'s cotton gin; loss \$10,000.

Reynolds, Ga.—James Hollis' saw-mill; loss \$1000.

Selma, Ala.—International Cottonseed-Oil Co.'s plant partially destroyed; loss \$100,000.

Temple, Texas.—National Steam Laundry.

Pine Bluff, Ark.—Henry G. Cady's saw-mill; loss \$2000.

Wellington, Texas.—J. H. Deavenport's cotton gin.

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BUILDING NOTES.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Albany, Mo.—Library Building.—Louis Vallin, Stanberry, Mo., has contract at \$9071 for the erection of proposed library building after plans by Eckel & Mann, St. Joseph, Mo.

Alice, Texas—School Building.—Town contemplates issuing bonds for the erection of brick school building. Address F. B. Nayer.

Atlanta, Ga.—Hotel Improvements.—Kimball House Co. is having plans prepared by Willis F. Denny, 1018 Prudential Building, for proposed improvements to the Kimball House at a cost of \$100,000.

Bartlett, Miss.—Institution Building.—McKnight & Barker of Memphis, Tenn., have contract at \$13,413 for the erection of building for the Shelby County Industrial School, previously reported; structure to be three stories, brick and stone, 50x75 feet, slate roof and hot-water heat. Alsop & Woods, Randolph Building, Memphis, Tenn., prepared the plans.

Beaufort, S. C.—Hotel.—Beaufort Harbor Co. has purchased site on which to erect modern hotel.

Birmingham, Ala.—Hotel.—It is reported that an eight-story fireproof hotel will be erected, and a Mr. Neal of Macon, Ga., is interested. Mr. Neal can be addressed care of the St. Nicholas Hotel.

Bristol, Tenn.—Office Building.—First National Bank contemplates the erection of another office building; structure to be of gray pressed brick, 65x75 feet.

Brookfield, Mo.—Church.—Christian congregation is having plans prepared by B. J. Patrick for the erection of brick and stone edifice, 40x40 feet, costing \$8000.

Chattanooga, Tenn.—Dwelling.—Garrity-Hahn Building Co., Knoxville, Tenn., has contract for the erection of R. S. Faxon's proposed brick and stone residence, 150x75 feet, after plans by Meade & Garfield, Cleveland, Ohio; cost \$125,000.*

Chattanooga, Tenn.—Hotel.—Reports state that Lydell Wilson of Randolph, N. Y., is investigating site with a view to erecting hotel.

Colquitt, Ga.—Courthouse.—Miller county has voted proposed \$20,000 bond issue for the erection of courthouse. Address County Judge.

Cummings, Ga.—Courthouse.—Contract for the erection of Forsyth county's proposed courthouse will be let January 3, 1905, at the courthouse, Cummings; cost \$25,000; plans and specifications on file with J. W. Golube, architect, Atlanta, Ga.; J. R. Echols, clerk.

Dallas, Texas—Telephone Building.—Self & Hayes have contract at \$30,000 for telephone building at Bryan street and Haskell avenue, reported last month to be erected by the Southwestern Telephone & Telegraph Co.

Elon College, N. C.—Dormitory.—Plans have been prepared for the erection of \$20,000 dormitory for Elon College.

Fort Worth, Texas—Lodge Building.—M. L. Waller, architect, Rooms 34 611½ Houston street, Fort Worth, will open bids December 29 for the erection of three-story lodge building, 100x100 feet, for the I. O. O. F.*

Fort Worth, Texas—Dwelling.—E. T. Ambler of Dallas, Texas, has purchased site at Pennsylvania avenue and Lake street on which to erect residence.

Gainesville, Ga.—Church.—First Baptist Church contemplates erecting \$20,000 edifice. Dr. J. A. Wynne is pastor.

Grafton, W. Va.—Business Block.—Henry Wehn will erect five-story brick business block.

Greensboro, N. C.—College Building.—Reports state that the Lutheran Synodical Board of St. Louis, Mo., has secured site and will expend about \$50,000 in the erection of buildings for educating colored boys. Main college building will cost \$18,000.

Guthrie, O. T.—Lodge Building.—Local Lodge of Eagles will erect three-story brick and stone building, 75x110 feet.

Hagerstown, Md.—Hospital.—Washington County Hospital Association contemplates erecting hospital.

Hartsville, Tenn.—Courthouse.—Courthouse Building Commission will open bids December 29 for the erection of Trousdale county courthouse. Bids may be submitted separately for the foundation up to and including water table, all of local limestone; for the building complete above water table, or for the building complete, including foundation. Plans and specifications are in the hands of the commission, and may be had or seen on application to Col. W. J. Hale,

Hartsville. Usual rights reserved. (Bids were previously advertised to be opened November 28.)

Hot Springs, Ark.—Hotel.—Charles L. Thompson, Little Rock, Ark., is preparing plans for hotel reported last week to be erected by Dr. A. U. Williams.

Hot Springs, Ark.—Church.—C. L. Thompson is preparing plans for \$75,000 edifice reported last week to be erected by the Baptist Church.

Huntington, W. Va.—Government Building. It is reported that William Weider of Champaign, Ill., has contract for the erection of proposed government building.

Jacksboro, Tenn.—Hotel.—Eagle Springs Hotel Co. has been organized, with \$35,000 capital, and is having plans prepared by Architect Waters of Knoxville, Tenn., for the erection of 100-room hotel.

Jackson, Miss.—Lodge Building.—Pythian Castle Hall Association, reported incorporated last week, will erect building 42x100 feet at a cost of \$35,000, and desires to correspond with architects. H. M. Dun is secretary.

Jacksonville, Texas.—Building.—J. F. Goodson has let contract for the erection of a two-story brick building.

Jonesboro, Ark.—Store Building.—Alex. Berger desires plans and specifications for three-story white tile-brick store building, 100x50 feet.

Kansas City, Mo.—Supply House.—Board of Public Works has let contract to the Urban Construction Co. at \$22,551 for the erection of proposed supply house; structure to be two stories of brick with concrete floors.

Kansas City, Mo.—Apartment-house.—J. P. Batchelor of Valley Falls, Kan., has had plans prepared by J. G. Braecklein, 15 West 9th street, for the erection of three-story apartment-house 150x100 feet, of stone and brick, with terra-cotta cornices; cost \$35,000.

Knoxville, Tenn.—Hospital.—Tennessee Medical College has let contract to Thomas & Turner for the erection of \$30,000 hospital building, previously reported.

Lawton, O. T.—City Hall.—W. M. Turner, mayor, will open bids December 15 for the construction of city hall in accordance with plans and specifications on file in the office of Robert Landers, city clerk. Certified check in 5 per cent. of amount of bid must accompany each bid. Usual rights reserved.

Louisville, Ky.—Library Building.—Louisville Free Public Library contemplates the erection of five branch library buildings at a cost of \$30,000. A. H. Hopkins is librarian.

Louisville, Ky.—Dwelling.—J. J. Gaffney has prepared plans for Rev. Edgar G. Mullin's proposed residence. Same architect has also prepared plans for nine two-story residences for the Central Improvement Co.

Louisville, Ky.—Dwelling.—D. N. Murphy & Bro. have prepared plans for proposed residence for Mrs. Minnie B. Rickle.

Louisville, Ky.—Office Building and Warehouses.—D. N. Murphy & Bro. are preparing plans for office building and two warehouses reported last week to be erected by Beknap Hardware Co.; to be of mill construction, exhaust steam-heating plant, electric lights, etc.

McMehen, W. Va.—School Building.—Board of Education, Benwood, W. Va., is receiving bids for the erection of \$50,000 brick school building previously reported. C. D. McCarty, Wheeling, W. Va., prepared the plans.

Memphis, Tenn.—Dwelling.—J. H. Costello is having plans prepared by Fred H. Eely & Co., Randolph Building, for the erection of proposed two-story residence to cost \$7000.

Montgomery, Ala.—Store Building.—V. H. Tulane will erect two-story brick store building.

Moundsville, W. Va.—Dwellings.—Glen Easton Coal & Coke Co. will erect 50 dwellings near Moundsville. E. T. Breisch, Keystone Building, Pittsburg, Pa., has charge of the construction.

Nashville, Tenn.—School Building.—Board of Education contemplates the erection of \$15,000 school building in the fourteenth ward.

Nashville, Tenn.—Hotel.—It is reported that James G. Holbrook of Buffalo, N. Y., is investigating site with a view to erecting hotel.

New Orleans, La.—Club Building.—Southern Athletic Club contemplates expending about \$5000 in improvements to building. Address President Werlein.

New Orleans, La.—Store and Office Building.—Mull & Fromberg are preparing plans for the erection of four-story fireproof store and office building.

North Augusta, S. C.—Sanitarium.—T. D. Coleman, William H. Doughty, Jr., and E. E. Murphy have incorporated the Pine Heights Sanitarium, with \$35,000 capital.

Ocala, Fla.—Business Building.—Rossie E. Yonge will erect one-story building 30x50 feet on South Osceola street.

Oklahoma City, O. T.—Business Building. It is reported that the Western Newspaper Union contemplates the erection of two-story brick and stone building 100x100 feet at a cost of \$40,000 on site recently purchased. C. E. Verity is local manager.

Palatka, Fla.—City Building.—City Council, Palatka, will open bids December 20 for the erection of a city building. Plans and specifications may be seen at the office of J. N. Blackwell, city clerk, Palatka, or H. J. Klutho, architect, Jacksonville, Fla. Certified check for \$500 must accompany each bid. Usual rights reserved.

Raleigh, N. C.—Freight Depot.—It is reported that the Seaboard Air Line Railway contemplates erecting \$25,000 freight depot; W. W. Gwathmey, Jr., chief engineer, Portsmouth, Va.

Richmond, Va.—Hotel Improvements.—It is reported that an addition will be built to the Hotel Richmond and other improvements made at a cost of \$350,000; J. Marshall Atkinson, manager.

Richmond, Va.—Hotel Improvements.—Reports state that Col. John Murphy will make extensive improvements to the Murphy Hotel, including the erection of 12-story addition, involving an expenditure of \$400,000.

Roland Park, Md.—Dwelling.—Wm. C. Page, president of the Calvert Bank, Howard and Saratoga streets, Baltimore, Md., will erect dwelling after plans and specifications by Sperry, York & Sawyer, architects, Builders' Exchange Building, 2 East Lexington street, Baltimore, Md. Structure to be two and one-half stories high, 23.6x50 feet, with two-story wing, 15x23 feet; frame construction on stone foundation; electric wiring and fixtures; sanitary plumbing; heating system. Gladfelter & Chambers, Woodberry, Md.; Wm. Gerwig & Son, Catonsville, Md.; Roland Park Company, Roland Park, Md.; Leonard J. Brown, 2908 Huntington avenue, Baltimore, Md., and Ignatius Smith, 203 St. Paul street, Baltimore, Md., have been selected to estimate on the construction. Estimates to be in December 8.

Rome, Ga.—Lodge Building.—B. P. O. E. will arrange at once for the erection of building to replace structure destroyed by fire. Address care of H. P. Melkham.

Saluda, S. C.—Building.—E. W. Forrest will erect two-story building of concrete.

Savannah, Ga.—Bank Building.—It is reported that the Savannah Bank & Trust Co. contemplates erecting bank building at a cost of \$150,000.

Savannah, Ga.—Sanitarium.—Park View Sanitarium will erect three-story addition, 32x44 feet, of frame with metal roof.

Selma, Ala.—Postoffice.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids December 28 for the construction, complete, of the United States postoffice, Selma, in accordance with drawings and specifications, copies of which may be had at the office of the supervising architect or at the office of postmaster, Selma, Ala., at the discretion of the supervising architect.

Sherman, Texas.—School Building.—Bids will be received until December 12 for the erection of two-story school building in accordance with plans and specifications on file in office of C. J. Haydon of the Haydon Grocery Co. and at office of S. B. Elliott, architect, 611 East Houston street, Sherman, Texas.

Shreveport, La.—Warehouse.—Queen City Furniture Co. will erect brick warehouse.

Somerville, Texas.—School Building.—School Board of Somerville Independent School District, Tom H. Shannon, president, Somerville, will open bids December 8 for the erection of brick school building. Plans and specifications can be seen at office of C. H. Page, architect, Austin, Texas, or at office of president, Somerville. Usual rights reserved.

Spartanburg, S. C.—Engine-house.—Thos. Keating & Co. have prepared plans for the erection of two-story brick building, 57x78 feet, for the fire department; cost \$6000.

St. Joseph, Mo.—Auditorium.—Eckel & Mann, architects, are receiving bids for the erection of three-story auditorium, 138x240 feet, for the Auditorium Company, to be of press-brick, stone, concrete and terra-cotta, iron, steel and wire work, concrete floor, asbestos roofing, steam and hot-blast fan system of heating, etc.

St. Louis, Mo.—Apartment-house.—St. Louis Improvement Co. has had plans prepared by Weber & Groves for the erection of proposed apartment-house; structure to be seven stories, 45x160 feet, of stone and steel, and cost \$600,000.

St. Louis, Mo.—Office Building.—Charles Espenschied is having plans prepared by Wm. P. Feth, Leavenworth, Kan., for the erection of two-story office building; structure to be of press-brick, stone and terra-cotta, composition roof, electric lights, and cost \$30,000.

St. Louis, Mo.—Apartment-house.—A. Blair Ridington, 620 Chestnut street, has prepared plans for a two-story flat building for Mr. Woltschek, Lincoln Trust Building, to be of brick and stone, tar and gravel roofing; cost \$9000. Bids for the construction will be received until December 10.

St. Louis, Mo.—Flat Building.—Kinsey Realty & Building Co., 814 Chestnut street, is receiving bids for the erection of a two-story flat building, 22x44 feet, after plans by C. W. Pomeroy, 816½ Chestnut street.

St. Louis, Mo.—Church.—Union Avenue Christian congregation contemplates erecting brick and stone edifice at a cost of \$75,000. Plans will probably be prepared by Weber & Jones, Stock Exchange Building.

St. Louis, Mo.—School Building.—W. B. Ittner, commissioner of school buildings, has submitted plans to the Board of Education for the proposed \$150,000 building for the Shepard School, and bids for the construction will shortly be asked.

Tulsa, I. T.—School Building.—City has voted the proposed \$50,000 bond issue for the erection of two school buildings. Address The Mayor.

Venus, Texas.—Church.—W. J. Smith has contract to erect frame church building, 75x75 feet, previously reported. M. L. Waller, Fort Worth, Texas, prepared the plans; cost \$8000.

Vicksburg, Miss.—Hotel.—Helgason Bros. and A. E. Parker have purchased site on Washington street on which to erect six-story hotel building.

Vicksburg, Miss.—Business Building.—Mann Building & Manufacturing Co. has contract at \$7600 for three-story brick building previously reported to be erected by Helgason Bros.

Washington, D. C.—Apartment-house.—Wood, Donn & Deming, 808 17th street N. W., are inviting bids for proposed \$150,000 apartment-house for Shepherd & Jenkins at 1735 H street N. W.

Washington, D. C.—Apartment-house.—James I. Marshall, 1321 G street N. W., has contract for proposed addition to Ontario Apartment-House at Lanier Heights.

Washington, D. C.—Apartment-house.—Burgess & Parsons have contract to erect nine flat buildings for H. A. Gibbs.

Washington, D. C.—Apartment-house.—Irvine M. Sunderland has let contract to the Abby Improvement & Investment Co. for the erection of three-story apartment-house, reported last week; cost \$16,000. Sunderland Bros. prepared the plans.

Wheeling, W. Va.—Church.—Paul A. Decham has contract to erect \$4,000 edifice reported last week under Benwood, W. Va., for the Latter Day Saints.

Yazoo City, Miss.—Church.—Barnwell & Reid have contract to erect brick edifice for Trinity Episcopal Church, previously reported.

RAILROAD CONSTRUCTION.

Railways.

Atlanta, Ga.—The Atlanta & Gulf Railway Co. has given notice that it will apply for a charter to build a line about 400 miles long from Atlanta southwest to the State line in Carroll county, and thence in the same direction to the Gulf of Mexico. Those interested are F. A. Kuhn, Kennon Dearing, R. B. Beedles, T. H. Goodwin, J. J. McClendon, Henderson Hallman, W. P. Powell, Hugh B. Cobbs, D. P. Fleishel and J. R. Bradbury, all of Atlanta.

Atlanta, Ga.—Mr. Ransom Rogers, civil engineer, writes the Manufacturers' Record that nothing will be done before spring on the proposed Athens, Floral Park & Newnan Air Line Railway, recently organized.

Austin, Texas.—Mr. R. H. Baker, vice-president and general manager of the Trinity & Brazos Valley Railway, writes the Manufacturers' Record that the company expects to do considerable construction next year, and that the line will be extended southeast from Mexia and also north or northwest out of Cleburne.

Beaumont, Texas.—Ed. Kennedy, promoter of the proposed Lufkin, Batson & Beaumont Railroad, is reported to have made a trip over the route with J. W. McCann of Springfield, Mass. The road is to run through Chambers, Liberty, Hardin, Polk and Angelina counties. Mr. McCann represents capitalists of Cleveland, Ohio. It is further reported that this proposition is to be an ex-

tension of the Beaumont, Sour Lake & Western.

Beckley, W. Va.—C. P. Howard, engineer for the Deepwater and Tidewater railways, is reported to have visited Norfolk, Va., to investigate concerning terminals for the projected line.

Birmingham, Ala.—The Birmingham Mineral Railroad will, it is reported, build a branch to DeBardeleben's mines.

Bloomfield, Mo.—The directors of the Thebes & Western Railway Co., lately granted a charter, are Griff Glover, J. A. Glover and B. C. Harrison of Bloomfield, S. McCoy of Cape Girardeau and V. O. Boone of Bonne Terre. The line proposed is from the Mississippi river in Scott county to the Castor river in Stoddard county, 55 miles.

Charleston, S. C.—The Charleston & Summerville Railway Co. has been granted a commission to build an electric railway from Charleston to Summerville, about 30 miles. The incorporators are J. J. O'Connell, Congressman George S. Legare and R. P. Evans, all of Charleston, and Warren F. Martin of Philadelphia.

Chickasha, I. T.—Capt. R. E. McWilliam and a party of engineers are reported to have completed all but about two miles of the survey for the proposed Canadian Valley & Western Railway from a point on the Muskogee Union Railway via Ada and Purcell to Chickasha.

Clarksburg, W. Va.—Engineers are reported at work surveying for a railroad between Clarksburg and Belington, W. Va., 31 miles.

Columbus, Ga.—Contractors for the Birmingham, Columbus & St. Andrews Railway are reported to have cleared the right of way from Chipleigh, Fla., to St. Andrews Bay, Fla., 48 miles.

Columbus, Miss.—President Newnan Cayce of the proposed Columbus, Memphis & Pensacola Railroad is reported as saying that engineers are working for the line between Columbus and West Point, Miss. It is also reported that the new line will merge its interests with the Pensacola, Alabama & Tennessee Railroad, which runs northwest from Pensacola, Fla., for 31 miles, and of which H. McLoughlin is president. H. P. Hornaday of Cincinnati is reported to be interested in the proposed construction.

Chronister, Cherokee county, Texas (P. O. Forest, Texas).—The Chronister Lumber Co., which has built a tram line to the Angelina river, will, it is reported, build an extension of 16 miles to Nacogdoches, Texas.

Corpus Christi, Texas.—It is reported that tracklaying will begin January 1 upon the 22-mile extension of the St. Louis, Brownsville & Mexico Railway from Robstown to Sinton, Texas, the contractors having rush orders.

Cumberland, Md.—The Cumberland & Pennsylvania Railroad is reported to be considering a plan to extend the Eckhart branch one and one-half miles to Frostburg and to operate it as a trolley line. C. L. Bretz is general manager. The line may also be extended to Lonaconing and Westernport.

Fairmont, W. Va.—The West Fork Belt Line Railway Co. of Fairmont has been incorporated to build a line in Harrison county connecting with the West Virginia Short Line near Meadow Brook, and again connecting with the same line near Bloom Station. The incorporators are J. M. Jacobs, C. H. Jenkins, Wilbur Griffins, J. M. Brownfield and Harry Shaw, all of Fairmont.

Forest, Miss.—Kirkland & Singleton of Forest, attorneys for the proposed New Orleans & Chicago Railroad, are reported as saying that the money to build the line has been secured in New York and Chicago.

Fort Thomas, Ky.—W. H. Donaldson at Fort Thomas is reported as saying that a cog railway three miles long with a grade of 158 feet to the mile will be built from Brent to the Fort.

Fort Worth, Texas.—Col. Morgan Jones, president of the Wichita Valley Railway, is reported to be working on a plan to build a line 25 miles long from Wichita Falls southeast to Windthorst, a German colony in Archer county.

Guthrie, O. T.—J. C. Van Riper of St. Louis, president of the St. Louis, El Reno & Western Railroad, is reported to have made a trip over the line to investigate concerning an extension to Texas and also about a proposed extension from Guthrie northeast to a point in Kansas. Those composing the party were St. Louis people, including G. H. Walker of G. H. Walker & Co., bankers; Blakesley Collins of Whitaker & Co., bankers; D. D. Walker of Ely & Walker Dry Goods Co.; Chas. Scudder and Isaac H. Orr, secretary of the St. Louis Union Trust Co. W. P. Homan of Guthrie is general manager.

Hagan, Ga.—W. M. Bradley is reported to

have begun grading on the proposed Liberty City, Glenville & Manassas Railway, incorporated in October by D. M. Bradley of Hagan and others.

Hagerstown, Md.—The Hagerstown Railway Co. and the Frederick & Middletown Railway Co., having been connected by the recent extension of the former, have begun the operation of through cars between the two points.

Houston, Texas.—The Houston & Galveston Interurban Railway Co. has again increased its capital, making the total amount \$3,000,000. W. B. Slosson and others are interested. It proposes to build a line to connect the two cities.

Kansas City, Mo.—William Kenefick, railroad contractor, is reported as saying that the Missouri, Oklahoma & Gulf Railroad Co., in which he and others are interested, will build 37½ miles of line next year, mostly in the Indian Territory. The company owns the Muskogee Union, which has nearly 50 miles of grade completed and right of way from Muskogee south to the Texas boundary. The route is via Henryetta and Denison. Engineers are now surveying from Muskogee northeast to Joplin, Mo. This line will run west of the Grand river, crossing the Missouri Pacific six miles east of Wagoner, and then going via Pryor Creek and either Afton or Fairland to Joplin. The grade will be .6 of 1 per cent.

Kittery, Maine.—The Central Texas & Gulf Railway Construction Co., to build a proposed railroad by that name, has been incorporated, with office at Kittery, by Horace Mitchell and G. A. Mitchell of Kittery, Maine, and A. M. Meloon of Newcastle, Maine. The backers of the project are not stated.

Little Rock, Ark.—A mass-meeting of citizens has accepted the proposition of Col. C. C. Godman to build a railroad 50 miles long northward from Little Rock to a point near Quitman in Cleburne county on condition that \$100,000 be subscribed. A number of subscriptions have already been made to the fund. A later report says that the whole amount will not be asked for now, but that \$5000 will be immediately raised for a preliminary survey.

Louisville, Ky.—Concerning the report that the proceeds of the \$2,000,000 issue of bonds authorized by the South & North Alabama Railroad (Louisville & Nashville system) would be devoted to extensions and improvements, an officer of the system informs the Manufacturers' Record that he is unable to say how the funds will be applied.

Macon, Ga.—The Georgia Southern & Florida Railway will, it is reported, build a connecting line at Palatka, Fla. J. J. Gaillard is chief engineer at Macon, Ga.

Marshall, Texas.—Engineers for the Gulf, Texas & Northern Railroad have begun a survey to connect with the Texas & Pacific. M. Scully, W. L. Martin and others of Marshall are interested. A later report says that construction is being pushed. Fifteen grading teams have arrived and 30 more are on the way to Marshall.

McComb, Miss.—The Liberty-White Railroad will, it is reported, soon be extended to the Mississippi river. Charles Treas is chief engineer.

Mobile, Ala.—It is rumored that the Mobile, Jackson & Kansas City Railroad projects an extension to New Orleans. A. N. Bullitt is chief engineer. On the north and south line now building the Worthington Construction Co. of Birmingham is reported to have completed about 50 miles of grade from Newton, Miss., to a point north of Philadelphia, Miss., and turned it over to the company. The spur to Decatur is also graded. Tracklaying on this newly-completed work is expected to begin about January 15.

Moorhead, Miss.—It is reported that some surveys are being made for the proposed Memphis & Gulf Railroad, incorporated in March, 1903, by Chester H. Pond of Moorhead, Miss., and others to build a line from Memphis, Tenn., to Pensacola, Fla., with a branch to Mobile.

Nacogdoches, Texas.—L. J. Buckner, representing railroad contractors, is reported to have made a preliminary examination for a railroad from Alexandria, La., to Greenville, Miss. J. D. Garrison, civil engineer at Nacogdoches, Texas, may be able to give information. Winston Bros. Co. of Minneapolis, Minn., is said to be interested.

Natchez, Miss.—The Natchez & Gulf Railroad Co., incorporated two years ago by A. G. Campbell, president of the Natchez National Bank, and others has renewed its charter to build a line from Natchez to Gulfport, Miss., 19½ miles. The other officers of the line were J. W. Lambert, vice-president; W. W. Hungerford of Gulfport, chief engineer and general manager; W. H. Shields,

secretary, and S. H. Lowenburg, treasurer, both the latter of Natchez. Mr. Lowenburg being president of the Natchez Trust & Security Co. Mr. Campbell was president of the line. The road was surveyed to run through timber lands of long-leaf pine.

Norfolk, Va.—Engineers for the Seaboard Traction Co. are reported to be working on the proposed line from Norfolk via Suffolk to Smithfield, 40 miles. Lee Britt is general counsel for the company.

Norfolk, Va.—The Norfolk & Portsmouth Belt Line Railroad is reported to be investigating for an extension into Norfolk and possibly to Sewell's Point. George S. Shafer is superintendent at Port Norfolk.

Opelika, Ala.—C. G. Strickland of Philadelphia, Pa., has, it is reported, made an inspection of the route proposed for the Opelika & Auburn Electric Railway, projected by Rush Taylor of Opelika and others, and will, it is said, make a favorable report to Eastern capitalists upon the proposition.

Palestine, Texas.—The International & Great Northern Railroad will, it is reported, build a line into the Humble oil field, the extension being made from Westfield, 17 miles. J. D. Trammell is chief engineer.

Pioneer, Tenn.—The Schlosser Leather Co. of Pioneer writes the Manufacturers' Record denying the press report that it will build a railroad.

Raleigh, N. C.—The Raleigh-Durham Passenger & Power Co. has been chartered to build an electric railway about 25 miles long to connect the two cities, with two belt lines at Raleigh and street-car facilities also for Durham. The incorporators are W. J. Nelms of Newport News, Va.; B. S. Jerman and Thomas Staples Fuller of Raleigh, N. C., and T. B. Fuller, Jones Fuller and F. L. Fuller of Durham, N. C. The following officers have been elected: President, B. S. Jerman; vice-president, W. J. Nelms; secretary and treasurer, Thomas S. Fuller.

Richmond, Va.—Mr. F. W. Scarborough, engineer maintenance of way Chesapeake & Ohio Railway, writes the Manufacturers' Record confirming the report that the contract to build a second track from Lynchburg, Va., east to Tyree, about three miles, has been let to Curtis & Matthews of Clifton Forge, Va.

Richmond, Va.—Mr. I. Hilber, Lasley P. O., Louisa county, Virginia, in writing the Manufacturers' Record about a copper and iron ore mine, says: "Anticipate having two and one-half miles of railroad spur put into operation direct from Trevilian Station of the Chesapeake & Ohio Railway as soon as we can perfect arrangements with the railroad company." F. I. Cabell, engineer of construction of the C. & O. at Richmond, may be able to give information.

Savannah, Ga.—Reported that the Central of Georgia Railway will lay heavier rails from Griffin, Ga., to Chattanooga, Tenn. H. M. Steele is chief engineer.

Shelbyville, Tenn.—Dr. F. B. Reager of Shelbyville, together with Detroit capitalists, is reported to be working on a plan to build an electric railway from Shelbyville to Huntsville, Ala., about 50 miles.

Statesboro, Ga.—Cecil Gabbett, president of the Savannah & Statesboro Railroad, is reported as saying that those interested will soon be ready to begin construction of the proposed Savannah, Statesboro & Northern Railway, which has just been granted its charter. Forces will be started at each end of the line—one at Statesboro and the other at Athens, Ga.—and should be able to complete the work, 160 miles long, in a year.

St. Louis, Mo.—Reported that the Missouri Pacific is surveying to build a line from Springfield, Mo., to connect with the White river extension; also that plans are being made to build yards at Cotter on that extension. H. Rohwer is chief engineer. A later report says that grading has begun at Springfield on a two-mile contract, but that engineers are running a line further to connect at Aurora or Galent. The road is expected to be completed in seven months.

St. Louis, Mo.—The St. Louis & San Francisco Railroad is reported to be building freight and switching yards at Marion, Ark., and five or six miles of tracks will be laid. J. F. Hinckley is chief engineer at St. Louis.

St. Louis, Mo.—Mr. B. E. Johnson, chief engineer of the St. Louis Belt & Terminal Railway Co., 208 Union Station, writes the Manufacturers' Record that 3.2 miles of double-track line will be built to connect the St. Louis Belt & Terminal Railway at Walton Dale with the west belt of the St. Louis Terminal Railway at Eastern Avenue, Mo. Contract for grading and masonry let to John Scott & Sons and the Walsh Construction Co. of St. Louis, Mo., and Davenport, Iowa, respectively. Work has begun, to be completed by April 1 next.

St. Louis, Mo.—The St. Louis, Iron Mountain & Southern Railroad (Missouri Pacific system) has, it is reported, completed the first five miles of its projected line from Gordon, Ark., to Fort Smith. This road is to run via Caddo Gap.

Sumter, S. C.—Senator R. I. Manning is reported as saying that the preliminary survey is being made for the proposed Sumter & Northern Railroad, to run from Sumter via Bishopville to McBee. Those interested are Marion Moise, R. I. Manning, Neill O'Donnell and W. H. Ingram of Sumter, and R. E. Carnes, W. R. Scarborough, J. E. Stuckey, Thomas G. McLeod and others of Bishopville. Captain Thomas of Atlanta and W. L. Lee of Sumter are the engineers.

Terrell, Texas.—E. H. R. Green, president of the Texas Midland Railroad, is reported as saying that he intends to extend the line.

Weatherford, Texas.—The Chicago, Weatherford & Brazos Valley Railway Co. is reported to be taking steps to build the line from Weatherford to Bridgeport in Wise county. The line was incorporated several years ago to build between the two points, a distance of 32 miles, and also from Weatherford to Waco, 123 miles; Henry Warren, president, and R. S. Weltzell, chief engineer.

Street Railways.

Birmingham, Ala.—The Birmingham Railway, Light & Power Co. has been granted a franchise in Ensley to build a one-mile extension from the end of the Tuxedo line to Sherman Heights.

Hattiesburg, Miss.—The city council has granted a street-railway franchise to G. L. Hawkins and associates. Capt. J. T. Jones of Gulfport, Miss., president of the Gulf & Ship Island Railroad, is reported to be interested. The franchise is for 25 years, and bond for \$5000 was given to begin work by June 1 next and to complete three miles of line by June 1, 1906. A. F. Thomasson and S. E. Travis are the sureties.

Houston, Texas.—H. F. MacGregor and John G. Tod of the Houston Electric Co. are reported to be investigating concerning a proposition to build a street railway in Corpus Christi, Texas. Peter S. Chalmers of Houston and others are said to be interested.

Johnson City, Tenn.—The Johnson City car-line extension to the Carnegie Hotel is reported very nearly complete. It is four miles long.

Memphis, Tenn.—H. C. Prichard of New York is reported to be promoting a plan for about 10 miles of subway to be operated by electricity for freight purposes in Memphis. J. A. Omberg, city engineer, may be able to give information.

Port Arthur, Texas.—The Port Arthur Electric Street Car Co. is reported to be surveying for an extension of about two miles to the docks, and thence to West Port Arthur.

Richmond, Va.—It is reported that the Citizens' Rapid Transit Co. will build its proposed electric railway, the construction thereof being practically assured. Charles V. Meredith is counsel to the company, and it is said that out-of-town capital is interested.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Belting.—See "Foundry Equipment."

Boiler.—John A. Rogers, Hartselle, Ala., is in the market for a second-hand 25 to 35-horse-power vertical steam boiler.

Boiler.—Kenton Iron & Steel Co., Mason City, W. Va., is in the market for 400-horse-power boiler able to stand 150 pounds pressure; second-hand preferred.

Boiler.—J. R. Hawes, Atkinson, N. C., is in the market for new or second-hand 50-horse-power portable boiler.

Boilers.—See "Mining Equipment."

Brick Machinery.—See "Cement Sewer-pipe Machinery."

Brick Machinery.—Watkins Bros., Warren, Ark., are in the market for brick machinery.

Briquetting Machinery.—Schwars System Brick Co., 8-10 Bridge street, New York, N. Y., wants to correspond with manufacturers of briquetting machinery.

Building Equipment and Supplies.—Fredrick Moesser & Co., Birmingham, Ala., want prices on electric wiring, plumbing, sash, doors and glass, lime in bulk, 8x12-inch hexicon tile block, galvanized-iron work, iron and steel work, terra-cotta, etc.

Building Equipment and Supplies.—J. F. Grandy & Son, Greenville, S. C., wants prices on floor tile and press brick.

Building Equipment and Supplies.—See "Church Furniture."

Building Equipment and Supplies.—Garity-Hahn Building Co., Knoxville, Tenn., wants prices on mill work, iron work, glass, etc.

Building Equipment and Supplies.—M. L. Waller, Rooms 3-4, 611½ Houston street, Fort Worth, Texas, is in the market for terra-cotta, iron, steel and other building material.

Building Materials.—Knickerbocker Coal Co., Charleston, W. Va., wants prices on building materials.

Cannery Equipment.—See "Preserving-plant Equipment."

Canopies.—American Machine Co., Wilmington, Del., wants addresses of manufacturers of striped cotton canopies for use on roller swings. Orders will be placed in lots of 1000. Sample canopy furnished parties desiring to bid.

Castings.—James B. Northam, Lillington, N. C., is in the market for malleable-iron and brass castings on the order of harness buckles.

Cement Sewer-pipe Machinery.—S. N. Peters, Greensboro, N. C., wants to correspond with manufacturers of machinery for making cement sewer pipe.

Church Furniture.—M. L. Waller, Rooms 3-4, 611½ Houston street, Fort Worth, Texas, is in the market for rolling partitions, art glass, pews or seats, pulpits, etc.

Compressor.—See "Gas Plant."

Contractors' Equipment.—See "Steam Shovel."

Cotton-gin Equipment.—G. W. Bishop, Burnet, Texas, will be in the market for complete equipment for cotton gin.

Drilling Equipment.—Witthoff Brick Co., Birmingham, Mo., wants prices on electrical drill for shale.

Drying Apparatus.—G. E. Smith, 2118 Jackson avenue, Knoxville, Tenn., wants addresses of manufacturers of drying apparatus.

Dynamo.—See "Engine."

Electrical Supplies.—Banner Electric & Manufacturing Co., Oklahoma City, O. T., wants agencies for electrical supplies, etc.

Electrical Supplies.—Terrell-Hedges Company, 108 East 8th street, Chattanooga, Tenn., will be in the market for electrical supplies.

Electrical Equipment.—Witthoff Brick Co., Birmingham, Mo., wants prices on generator for electric winding drum. (See "Hoisting Equipment.")

Electrical Equipment.—See "Mining Equipment."

Electrical Machinery.—C. C. Henderson, Greenville, Ala., wants to correspond with manufacturers of electrical machinery and equipment.

Electric Conduit and Wiring.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids December 27 for the installation of an electric conduit and wiring system for the United States postoffice, Leadville, Col., in accordance with the drawings and specifications, copies of which may be had at the office of the supervising architect, or at the office of the superintendent of construction, Leadville, Col., at the discretion of the supervising architect.

Electric-Light Plant.—Witthoff Brick Co., Birmingham, Mo., wants prices on machinery and equipment for electric-light plant.

Electric-Light Plant.—City of Oxford, Miss., R. S. Adams, mayor, will open bids December 5 for the construction of electric-light plant.

Electric Wiring.—See "Building Equipment and Supplies."

Engine.—The municipal Board of Awards, City Hall, Baltimore, Md., invites proposals for the installation of engine and dynamo in the city jail. Plans and specifications can be seen in the office of the Building Inspector, City Hall. Bids must be submitted to

the office of Harry F. Hooper, city register, City Hall, on or before 11 A. M. December 14.

Engine.—Roswell Manufacturing Co., Roswell, Ga., wants 200-horse-power engine, second-hand, in good condition.

Engine.—John Davis Company, 54 North Washington street, Boston, Mass., wants a cross-compound vertical engine, about 200 horse-power. State condition and price.

Engines.—H. H. Spindle, Harrisonburg, Va., wants to correspond with manufacturers of gasoline engines.

Engines.—C. C. Henderson, Greenville, Ala., wants to correspond with manufacturers of both automatic and Corliss engines from 100 to 150 horse-power.

Engines.—See "Mining Equipment."

Engines.—Caldwell-Sites Company, Staunton, Va., wants addresses of firms making turbine steam engines.

Exhaust Apparatus.—See "Foundry Equipment."

Explosives.—C. W. Brown, Midland, Fla., wants to know the best explosive for blowing out stumps to clear stump land.

Fire-department Supplies.—City Council of Spartanburg, S. C., wants prices on stall guards, managers, hay racks, water troughs, brass sliding poles, iron stable gutters, steel beams, etc.

Foundry Equipment.—Hanks Foundry Co., Rome, Ga., is in the market for four exhaust mills for castings, belting, shafting, pulleys, etc.

Gas Plant.—S. F. Round, Lock Box 571, Mobile, Ala., wants prices on compressors suitable for compressing acetylene gas, one for general compressing station similar to Plutsch gas equipment, and smaller one to be operated on board a vessel. Larger one to be operated by steam or electricity, and smaller by steam or gasoline engine.

Grinding Mill.—G. E. Smith, 2118 Jackson avenue, Knoxville, Tenn., wants to communicate with manufacturers of mills for grinding barytes.

Grist Mill.—G. W. Bishop, Burnet, Texas, will be in the market for grist mill.

Grist-mill Machinery.—Little & Co., Eatonton, Ga., want catalogues and prices on grist-mill machinery, fans and other special parts.

Handle Machinery.—The Pine Bluff Bobbin Works, Pine Bluff, N. C., desires to correspond with manufacturers of handle-making machinery.

Heading Machinery.—J. M. Page, Amelia C. H., Va., wants prices on stave and heading machinery.

Heating Apparatus.—W. A. Lash, Greensboro, N. C., wants prices on heating apparatus.

Heating Apparatus.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids December 30 for furnishing heating apparatus complete in place for the United States postoffice at Leadville, Col., in accordance with drawings and specifications, copies of which may be had on application to the supervising architect, or at the office of the superintendent, Leadville, Col., at the discretion of the supervising architect.

Holisting Equipment.—Withhoff Brick Co., Birmingham, Mo., wants prices on electric winding drum and generator for same.

Knitting Machinery.—E. C. Smith, Edgefield, S. C., wants information regarding knitting mills and prices on machinery. He may buy 25 or 50 of 108 to 136 needle machines.

Machine Tools.—A. V. Kaiser & Co., 222 South 3d street, Philadelphia, Pa., are in the market for alligator shears heavy enough to cut plate up to one inch thick.

Machinery and Mill Supplies.—Charles T. Beall, Greensboro, N. C., wants to correspond with manufacturers of boilers, engines, mill supplies, etc., relative to representation in his territory.

Machine Tools.—Peacock's Iron Works, Selma, Ala., are in the market for a 12-inch swing lathe, nine feet between centers, delivered in Mississippi.

Machine Tools.—See "Marble-working Machinery."

Marble-working Machinery.—W. J. Alford, Knoxville, Tenn., is in the market for a second-hand lathe to turn marble, about 50-inch swing by 14 or 16 feet between centers.

Mining Equipment.—See "Railway Equipment."

Mining Equipment.—Brier Hill Collieries, John D. Fletcher, manager, Nashville, Tenn., desires to test a number of electric chain-cutting machines with a view to buying three or four.

Mining Equipment.—See "Grinding Mill" and "Drying Apparatus."

Mining Equipment.—Knickerbocker Coal Co., Charleston, W. Va., wants prices on equipment for mining coal, including boilers, engines, electrical equipment, etc.

Mining Machinery.—I. Hibler, Lasley, Va., will probably soon want additional machinery for mining sulphur, copper pyrites and manganese ores.

Motors.—See "Water Meters."

Oil-mill Machinery.—W. H. Bemis, Baracoa, Cuba, is in the market for coconut-oil-pressing machinery.

Pipe Fittings, etc.—Isthmian Canal Commission, J. G. Walker, chairman, Washington, D. C., will open bids January 10, 1905, for furnishing at Panama pipe fittings and accessories in connection with work on the Panama canal. Pamphlets containing full information furnished on application. Usual rights reserved.

Piping.—See "Tabling."

Plumbing.—See "Building Equipment and Supplies."

Plumbing Fixtures.—Isthmian Canal Commission, J. G. Walker, chairman, Washington, D. C., will open bids January 10, 1905, for furnishing at Panama a quantity of plumbing fixtures in connection with work on the Panama canal. Pamphlets containing full information furnished on application. Usual rights reserved.

Plumbing Tools.—Isthmian Canal Commission, J. G. Walker, chairman, Washington, D. C., will open bids December 23 for furnishing at Panama a quantity of plumbing tools in connection with work on the Panama canal. Pamphlets containing full information furnished on application. Usual rights reserved.

Preserving-plant Equipment.—Springdale Preserving Co., Springdale, Ark., is in the market for a press for pressing berry pulp, etc., to extract the juice.

Pulleys.—See "Foundry Equipment."

Pumping Engine.—R. S. Williams, city treasurer, Montgomery, Ala., will open bids December 19 for furnishing a high-duty pumping engine in accordance with specifications on file in the city engineer's office. Certified check for \$1000 must accompany each bid. Usual rights reserved.

Pumps.—Memphis Artesian Water Department, Lawrence Simpson, general superintendent, Memphis, Tenn., will open bids December 12 for construction and delivery to the Memphis Artesian Water Department five Johnston deep-well pumps. Plans and specifications may be obtained on application at the office of the Memphis Artesian Water Department, Memphis; also at the office of Thomas T. Johnston, consulting engineer, 906 Security Building, Chicago, Ill. Usual rights reserved.

Railway Equipment.—A. V. Kaiser & Co., 222 South 3d street, Philadelphia, Pa., is in the market for 500 to 600 tons of 40-pound steel relays and fastenings.

Railway Equipment.—A. V. Kaiser & Co., 222 South 3d street, Philadelphia, Pa., are in the market for a carload of 50-pound steel relays.

Railway Equipment.—Borderland Coal Co., Nohm, W. Va., is in the market for a mine locomotive, weight about 10 tons, height 6 feet, gauge 4 feet, drawbar (above rail) 10 to 12 inches, saddle tank; second-hand in good repair preferred.

Sawmill Equipment.—Dixie Lumber Co., Mobile, Ala., wants a rip saw 10x20 inches to self-feed and rip.

Shafting.—See "Foundry Equipment."

Shingle Mill.—Henry Stanell, R. F. D. No. 2, Kenly, N. C., wants prices on shingle mill with 16-inch saws.

Stable Equipment.—See "Fire-department Supplies."

Stave Machinery.—See "Heading Machinery."

Stave Machinery.—John M. Kerry, 506 Whiteside street, Chattanooga, Tenn., is in the market for machinery for manufacturing staves and corrugating them inside for round washing-machine tub.

Steam Shovel.—A. V. Kaiser & Co., 222 South 3d street, Philadelphia, Pa., are in the market for a one-half to one-yard light traction shovel.

Terra-cotta-pipe Machinery.—See "Cement Sewer-pipe Machinery."

Tubing.—James B. Northam, Lillington, N. C., is in the market for hollow steel tubing.

Turbine Engines.—See "Engines."

Water Meters.—Ferrero Bucarest, Sos Bonaparte No. 14, Bucarest, Roumania, wants catalogues of water meters.

Water-works.—Charles H. Bliss, Pensacola, Fla., wants bids on complete equipment for water-works plant.

Water-works Equipment.—See "Pumping Engine."

Windmills.—H. H. Spindle, Harrisonburg, Va., wants to correspond with windmill manufacturers.

Woodworking Machinery.—See "Stave Machinery."

Woodworking Machinery.—See "Handle Machinery."

MEXICO.

Broom Factory.—Messrs. Juan A. Creel, manager of Banco Minero, Chihuahua, Chi.,

and E. Avila of Monterey, N. L., will establish a large broom factory.

Electric-light Plant.—Enrique Creel, governor of Chihuahua, city of Chihuahua, Chi., has announced that during the coming year about \$200,000 will be expended for the erection of electric-light plant, construction of water-works system, improving pavements, etc., in Ciudad Juarez, Chi.

Mining Developments.—Hilario Losoya of Guanacevi, Durango, has organized a company capitalized at \$5,000,000 for the development of gold, silver and other mining properties in the State of Durango.

INDUSTRIAL NEWS OF INTEREST

Otis Elevator for Emperor.

Last Friday an Otis Electric Elevator was shipped from Yonkers, N. Y., to the Grand Cathedral at Berlin for the exclusive use of the German Emperor.

Big Mexican Contract.

The Westinghouse Electric & Manufacturing Co. of East Pittsburgh, Pa., through its agents, Messrs. G. & O. Braniff & Co. of Mexico, has been awarded the contract for all the electrical apparatus to be installed at the El Oro Mining & Railway Co.'s plant, El Oro, Mexico. This contract amounts to nearly \$100,000.

Factory Building for Sale.

Manufacturers who are in need of a modern brick factory building near New York are advised that such a structure, containing 40,000 square feet of space, is for sale. Rollers and engine of 150 horse-power are in position, also line shafting and automatic sprinklers. For further details address "D," care of the Manufacturers' Record.

Henry K. Brent Joins Equitable Life.

Henry K. Brent, superintendent of the burglary insurance department of the United States Fidelity & Guaranty Co. of Baltimore, Md., announces that he has resigned that office to accept a position at the home office of the Equitable Life Assurance Association of New York. Mr. Brent will assume his new duties in New York city on January 1.

Kentucky Farm for Sale.

Farmers or investors likely to be interested in an opportunity to buy a bluegrass farm in Kentucky are invited to address W. H. Kennon, Watkins & Easterling Building, Jackson, Miss. He wants to sell a 180-acre farm near Shelbyville. Paying crops of corn, wheat, tobacco and hemp are grown on this property, and there are 11 good buildings, including residence.

Frederic B. Watson.

One of the prominent dealers in railway equipment and supplies is Benjamin Watson, offices in Coffee Exchange Building, 66 to 70 Beaver street, New York city. Lately associated with him has been his brother, Frederic B. Watson, whose death on November 20 is reported. Those who have had dealings with the Watson house will regret to hear of Mr. Frederic B. Watson's death.

Overall and Shoe Factories Wanted.

One of the leading cities of the West, in a successful manufacturing district, is desirous of adding to its industries a shoe factory and overall and shirt factory. Suitable brick buildings are ready for the purpose, and special inducements can be offered the right men desirous of locating. For information regarding this proposition address No. 109, care of the Manufacturers' Record.

The A. D. Granger Co.

The A. D. Granger Co., contracting engineer, has removed to the Commonwealth Trust Building, Chestnut and 12th streets, Philadelphia, Pa., where much larger and more commodious offices have been equipped. T. M. Simpson remains as manager, his territory covering the eastern portion of Pennsylvania from Harrisburg to Philadelphia and the southern half of New Jersey.

Brick Works for Sale.

Building activity throughout the South continues the demand there for bricks, and an opportunity to acquire an established brick plant catering to the trade is now offered investors or manufacturers. The plant is making 20,000 dry-pressed and 60,000 stiff-mud bricks, also fire-bricks, every day, and plenty of clay is at hand. For further details address Axx, care of the Manufacturers' Record.

Want Ice-Plant Equipment?

Anyone who thinks of establishing an ice factory is informed that an opportunity to acquire a complete equipment of machinery

for that purpose is offered by S. S. Bush, general manager of the Passenger Street Railway & Power Co., Louisville, Ky. The plant is for 15 tons output daily, and must be removed from Pascagoula, Miss. It is the absorption system, operated three seasons, and in fine condition.

Cotton Mill for Sale.

Notice is being given interested parties that the Camden Cotton Mills property at Camden, S. C., will be offered for sale at public outcry on January 2. There are 12,000 spindles and 200 looms in position, with water and steam power. Operatives' houses and 180 acres of land included in the property. For information address L. A. Wittkowsky, master, Camden, S. C., or W. M. Shannon and C. H. Yates, receivers, Camden.

Woolen Mill for Sale.

Owing to the necessity of carrying out the provisions of the owner's will, the Landenberg Woolen Mills in New Garden township, Chester county, Pennsylvania, will be offered for sale at public outcry on December 17. The property includes 131 acres of land, two water-powers, woolen mill and equipment of machinery, etc. The Chester County Trust Co., West Chester, Pa., is the administrator, and can give information to inquirers.

Saw-Mills and Timber Lands.

There are many opportunities being offered to those who are desirous of engaging in the lumber industry, either for active manufacturing or for investment. Among them are the offerings of the C. W. Robinson Lumber Co., 806 Gravier street, New Orleans. This company has for sale 20,000 acres of stump land in Mississippi, seven saw-mills with timber lands in Mississippi and Alabama, logging and railway equipment, etc. Write the company for full details.

Coal and Timber Lands.

Valuable tracts of coal and timber lands are offered for sale by the Ryall Company, 150 Nassau street, New York. One lot is a pulp proposition, comprising 32,000 acres, containing 700,000,000 feet of spruce and 100,000,000 feet of other timber. Another is 55,000 acres with 800,000,000 feet of fine timber and 25,000,000 feet of spruce. The coal lands contain anthracite and bituminous, located in Kentucky, West Virginia, Alabama and Pennsylvania. Some properties are fully equipped. Send for detailed facts.

Steamboat to Have Gillett Engine.

A double-hull ferryboat now being constructed by the American Rivers Shipbuilding Co., Jeffersonville, Ind., for the Union Ferry Co. of New Orleans, is nearing completion. This boat will have two hulls, with the paddle-wheel running between, this type being one the company most favors for its use. It is most interesting in this connection to state that the boat will be equipped with the Gillett Balanced Valve Variable Cut-Off Steamboat Engine, which Messrs. Gillett & Eaton of Lake City, Minn., build.

Water-Power for Sale.

There is more than the usual activity prevailing at present in the development of Southern water-powers. Such development and the transmission of energy by electricity for all industrial purposes is attracting capitalists from all sections of the United States. One of the best water-powers in Georgia—500 horse-power available—is offered for sale by the owners. There is plenty of timber and rock at hand, and a cotton factory would be a most suitable plant for the site. Information can be obtained from W. P. Robertson of Madison, Ga.

Colony Lands Near Aiken, S. C.

Some 10,000 acres of land near Aiken, S. C., will be developed during the coming year. Northern farmers are expected to locate on the land, it being adapted for colonization, as it is a well-watered tract of sandy loam with clay subsoil, especially favorable to

fruit and truck growing. The Southern Railway traverses the property, and good markets for the products of agriculture are at hand. The Southern Field Real Estate Exchange at Spartanburg, S. C., is corresponding with New Jersey parties relative to the development.

Baltimore Manufacturing Properties.

Baltimore has numerous advantages as a location for manufacturing enterprises, and this is attested by the many establishments now in successful and profitable operation. There yet remain plenty of manufacturing properties available to purchasers. On the railways and the deep-water front there are properties, improved and unimproved, awaiting utilization by enterprising men. Those who may want manufacturing properties of any character whatever are advised to address Messrs. D. C. Woods & Co. of Baltimore, Md. This firm has a number of advantageous sites, buildings, etc., for sale.

Highest Award to Huennekes System

Those who have recognized the inherent merit and the certain successful future of the sand-lime brick industry will be interested in a decision of the jury of awards at the Louisiana Purchase Exposition in St. Louis. The decision gives the highest award in its class to the H. Huennekes Company of 114 Liberty street, New York, for its system of manufacturing building bricks from sand and lime. The Huennekes Company acts as engineer and contractor for the installation of complete plants under its system. Manufacturers are invited to write for details regarding the Huennekes system.

Valuable Factory Site Offered.

Manufacturers who may be on the lookout for an advantageous manufacturing property will find such an opportunity on the Baltimore & Ohio Railroad 36 miles from Baltimore. The property includes 60 acres of land, stone dam laid in cement, with head and tail race; water-wheels of 125 horse-power, boilers of 230 horse-power, two-story carpenter shop, etc. A bountiful supply of soft spring water runs through the land. A paper mill, woolen mill, cotton mill or distillery would find this an exceptionally good location. John A. Dushane, 7 East Lombard street, Baltimore, Md., can furnish further details.

Big Contract for Metal Windows.

In the construction of modern buildings great attention is given to fire-protective features. One of these latter is the use of metal windows, preventing the entrance of fire from without the structure protected. The new office building of the Commercial Realty Co. of Norfolk, Va., will be equipped with metal windows at a cost of some \$15,000. Contract for furnishing the windows has been awarded to Messrs. J. C. McFarland & Co. of Chicago, Ill. The McFarland firm manufactures automatic metal windows, double-hung or pivoted, which have been accepted by the underwriters and are in great demand throughout the country.

Southern Flour Mills.

Through their Southern representative, L. L. Houseknecht, Messrs. Sprout, Waldron & Co. of Muncy, Pa., have recently closed contract for 40-barrel mill with Platt & Osborn of Canton, N. C. The mill will be equipped with a complete line of Monarch milling machinery, including power and power connections. Messrs. Sprout, Waldron & Co. also have a contract with the Romeo Mill Co., Mosheim-Greene Co., Tennessee, for a complete 50-barrel spring and winter wheat mill. The outfit will consist of four double stands, 7x14 Monarch roller mill, two Monarch style B bolters, centrifugal reel, purifier, dust collector, receiving separator, scourers, etc., of the Monarch type.

Small Refrigerating Plants.

There are instances where small refrigerating plants have been installed to the great satisfaction of the hotel owner, commission merchant, butcher, storekeeper, bottler, ship-master and others. Refrigerating plants of this size and character have to be especially designed and manufactured in order that the best results may be obtained. The Brunswick Refrigerating Co. of New Brunswick, N. J., has made a specialty of this class of work. It offers refrigerating plants for the class of operators mentioned, as well as for residences and for regular ice-manufacturing and refrigerating companies catering to the general public. Write the company for full details regarding its equipments.

A Crompton-Thayer Announcement.

Textile manufacturers and others interested in weaving machinery should note the announcement of the Crompton-Thayer Loom Co. of Worcester, Mass.: "The Crompton-Thayer Loom Co. has purchased all the pat-

ents issued to H. W. Smith of Worcester excepting one which was sold to the Draper Company of Hopedale. The claims of the patent sold to the Draper Company are broad enough to comprehend any loom with fancy head and automatic feed. The patents obtained by the Crompton-Thayer Loom Co., about one dozen in number, cover every method of detecting on the bobbin in looms using drop boxes. The Crompton-Thayer officials believe they absolutely control the entire automatic drop-box field."

No. 6 Density of Keystone Grease.

Heretofore the manufacturers of that well-known lubricant, the Keystone Grease, have admitted that its heavy consistency made it unsuited for machinery where it is impossible to apply grease cups and the heavier densities of grease. But this has been overcome by the introduction of No. 6 Density of Keystone Grease, which can be used on all kinds, classes and sizes of machinery without exception. This new Keystone product is applicable by means of ordinary oil-cans, and its use is therefore unlimited. It is especially valuable for use as a cylinder lubricant, and is claimed to have much superior wearing qualities to oil. Anyone who cares to test this No. 6 Density of Keystone Grease will be furnished samples by the manufacturer, the Keystone Grease Co., Allegheny avenue and 20th street, Philadelphia, Pa.

Interesting Electric Contract.

The Canadian Westinghouse Co., Limited, has sold to the Hamilton Cataract, Power, Light & Traction Co., for use in its Victoria substation at Hamilton, Ontario, two motor-generator sets, each consisting of a synchronous motor and a direct-current generator. The motor-generator sets will be of the two-bearing type, the generators delivering direct current at 550 volts to the railway system, and each being rated at 750 kilowatts. The synchronous motors will take two-phase current at 8000 alternations and 2400 volts, and will be rated at 1350 horse-power. The excess of capacity in the motors is provided so that they may be used for raising the power factor of the transmission system. Power is taken through lowering transformers from the high tension transmission line from the De Oew Falls station of the company. These motor-generator sets will be built at the works of the Westinghouse Electric & Manufacturing Co. at East Pittsburgh, Pa.

Gisholt Adjustable Reamer.

A natural outgrowth of the manufacture of machine tools is the demand for small tools to go with the machines. The Gisholt "Solid" Adjustable Reamer is one of such small tools. Unusual care is taken in the construction of this reamer, making it a tool that will stand hard usage with the minimum of wear. Blades are made of the best tool steel, carefully inserted to a driving fit, and differ from the usual form of inserted-blade reamers, in that each blade of the Gisholt has two cutting edges. Heavy, wide, flat stock is used, materially lessening the liability of breakage. The reamer has the solidity of a one-piece tool, yet may be readily expanded when worn under size, the two screws holding each blade in place, making an easy and efficient means of adjusting. These reamers are made in all standard sizes. The body is of high carbon steel, bored and slotted to fit standard reamer arbors. The Gisholt Machine Co., Madison, Wis., manufactures the reamer.

Trinidad Asphalt Manufacturing Co.'s Prizes at St. Louis.

The question of roofing for the buildings of the Louisiana Purchase Exposition was one of the most important to decide. Many of the structures covered acres, and, being built of light materials, it was necessary to select roofings bound to be waterproof and durable and capable of being painted to get the desired color effects. These requirements resulted in 10,000,000 squares of Rubber Feltine Silicate Roofing being used. It is therefore interesting to know that this roofing was manufactured by the Trinidad Asphalt Manufacturing Co. of 320 South 21st street, St. Louis, Mo. The Trinidad Company's exhibit in the Mines Building was also an interesting thing to view. It represented a huge globe (the company's trademark) covered with roofing to signify that the Trinidad products cover the world. The grand prize, a gold medal, and a silver medal were awarded the Trinidad Asphalt Manufacturing Co. for its manufactures.

Coal-Handling Machinery.

The Mead-Morrison Manufacturing Co. of New York and Boston has been awarded contract to furnish coal-handling machinery for the new Gould street power-house of the Eastern Electric Construction Co., Boston. The coal is received from railroad cars,

dumped into hopper under cars, passes through coal crusher, thence to an inclined skip hoist, which deposits in a hopper overhead and delivers the coal to the cars of the cable road, which take the same into the boiler-house and discharge into the immense overhead bunkers. The coal is weighed in the cable cars immediately after they are filled. The skip hoist is operated by means of a steam engine. The cable road is electrically driven, as is also the coal crusher. This crusher is of the single-roll type manufactured by this firm, and has proved itself much superior to the older types of the two or three-roll crushers, as by a simple arrangement the coal can be crushed to any desired size, or can be passed through without being crushed. By means of the automatic safety appliance it is impossible to break the roll, even when a hard or refractory substance is fed to the crusher.

Four Gold Medals to Goulds Manufacturing Co.

Pumps comprise a class of mechanical equipment that is in large demand and the design and construction of which engages the attention of some of the best-known originators in American-built machinery. Possibly no specialist in pumps is better known in the industrial world than is the Goulds Manufacturing Co. of Seneca Falls, N. Y., and the results achieved at the St. Louis Exposition by the company makes interesting reading for those who are desirous of keeping posted as to the latest and best development in hand and power pumping apparatus. The Goulds Manufacturing Co. received four awards of gold medals—for general exhibit, for exhibit in Horticultural Hall of hand and power pumps, for exhibit of sprayers and spray fittings, and for electric triplex boiler-feed power pump, feeding 4000 horse-power boilers, operating in boiler-house which supplied power for Machinery Hall. Another interesting fact to add is that the last-named pump has been purchased by the management of the Lewis & Clark Exposition, to be held at Portland, Ore., next year. The pump will be used in that fair's machinery hall. These results speak volumes in praise of Goulds pumps.

New Exhibits in Philadelphia Bourse

Users of machinery and others who are interested in the progress of American machinery are advised that some prominent enterprises have recently rented spaces and placed their manufactures in the exhibition department of the Philadelphia Bourse, Philadelphia, Pa. The Murray Iron Works of Burlington, Iowa, has placed on exhibition a 300-horse-power engine, heavy-duty type, special design. The workmanship throughout is superior. Valve motion and connections are of forged steel. Governor has ball bearings. Crankshaft is made of forged steel, wheel 12 feet diameter by 25-inch face, weight 12,000 pounds. It makes a very attractive exhibit. A. L. Dutton, Eastern representative, has office adjoining exhibit. The N. C. Lane Co. shows the Collins damper, regulators, oil filters and oil system. The Germania Lamp Co. shows a fine display of its electric lamps; office in the department. J. H. Lake and Vaughn Bros. will display their gas and gasoline engines and launches. The E. H. Godshalk Co. will display its gas and gasoline engines and launches. The Egly Autographic Registering Co., Dayton, Ohio, shows its registers and the Egly merchandise systems. The Philadelphia Gear Works (formerly Grant Gear Works) will display its system of gearing. The Novelty Tool Manufacturing Co. will display the Keystone combination tool-anvil forge, pipe vise, drill and lathe, a complete outfit. The Pittsburgh Fuel Saving Furnace Co. will display its fuel-saving furnace shaking grate and smoke-consuming furnace. Frank B. Smith will display a line of his patent pneumatic dispatch apparatus.

TRADE LITERATURE.

Roebbling's Sons Wire Rope.

Wire rope is universally used in industrial activity, and that made by the John A. Roebbling's Sons Co. of Jersey City, N. J., is known throughout the world for its excellence. The Roebbling Company is now issuing its latest price-list and discount sheet, taking effect November 29. Users of and dealers in Roebbling wire rope should not fail to have a copy of the sheet.

About Steele Brick Machinery.

As a reminder of their success in building brick machinery, the firm of Messrs. J. C. Steele & Sons of Statesville, N. C., is sending out to probable buyers a mailing card illustrating two of their machines. The Continuous Rotary Cutter and the No. 5 Steele Brick Machine are shown. The Continuous Rotary Cutter is a machine regarding the

merits of which the Steeles make most emphatic claims, and these claims are attested by the experience of many users in the brick-manufacturing industry.

"Graphite" Again Appears.

Readers of that most interesting publication, "Graphite," will greet with pleasure the December issue, now being distributed. The publishers have always heretofore presented facts and information of value to users of graphite in any shape, and this month's edition is no exception to the rule. It contains articles on the proper annealing of crucibles, graphite for threaded joints, graphite for lubricants and pipe joints, graphite suggestions, etc., including references to the productions of the Joseph Dixon Crucible Co., the famous manufacturer of graphite. The company will send copies of "Graphite" to applicants.

"American" System of Sand-Lime Bricks.

There is no question as to the desirability of using sand-lime bricks. It is only necessary that the prospective manufacturer of them select the machinery which will give the best possible results. By the methods perfected in the "American" system various automatic mixing, measuring, grinding and conveying machines are used for preparing the sand and lime and for mixing it in the proper proportions in large quantities. The materials are not handled after first fed to the machine until the perfect brick comes from the press. The bricks are put to a steam pressure of 125 pounds to the square inch for 8 or 10 hours. Under this heat, moisture and steam pressure a chemical combination takes place between the silica of the sand and the lime, forming calcium silicate and hardening the brick into stone; in fact, forming an artificial sandstone which continues to grow harder with age. Bricks made by the "American" system are ready for laying in the wall the next day. An illustrated pamphlet describing the system has been issued. It contains much interesting information regarding the sand-lime-brick industry and many details of superiority regarding the "American" system which space forbids reference to in this column. The American Sand-Lime Brick Co., Great Northern Building, Chicago, Ill., manufactures the equipments used in the system, and invites requests for a copy of the publication referred to.

Modern Pumping Machinery.

There has just been issued a publication entitled "Pumping Machinery," which, although devoted to an exposition of one company's products, is an encyclopedia of the best practice in the design of pumping machinery, and should be included in the library of every engineer and manufacturer. This book is issued by Henry R. Worthington, 114 Liberty street, New York. It is printed in two colors, and the half-tone illustrations, printed in black upon a high grade of coated book paper, stand out effectively from the reading matter, printed in sepia. The cover is printed in black, light green and gold upon a dark-green background, the whole forming an excellent example of the engraver's and printer's arts. The apparatus described comprises all of the many types of pumping, condensing and measuring devices developed by this well-known company in the 64 years of its existence, the most prominent being the Duplex Steam Pump, of which Henry R. Worthington was the inventor. Special designs of this type of pump are adapted to boiler-feeding, mine-pumping, removing air and circulating water for condensers, water-works service, fire service, etc., and it is remarkable to note that a water-works engine of this type, without flywheels, has given a duty of 174,000,000 foot pounds per thousand pounds of steam in a test made at the Central Park Avenue pumping station, Chicago. Other apparatus described includes condensers, water meters, etc. Of centrifugal pumps it may be mentioned that the Henry R. Worthington Company has already made patterns for over 600 different types. One of the catalogue's illustrations shows the large turbine pumps supplying the Cascades at St. Louis. Although devoted to one company's products, this publication is in reality an encyclopedia of the best present practice in the design of pumping machinery, and should be included in the library of every engineer and manufacturer.

The First National Bank of Aubrey, Texas, has been authorized to begin business with \$25,000 capital. B. B. Samuels is president, and H. G. Musgrove, cashier.

The Bank of Whigham, Decatur county, Georgia, capital \$50,000, has been granted a charter.

FINANCIAL NEWS

Review of the Baltimore Market.

Office Manufacturers' Record,
Baltimore, Md., December 7.

A rapid rise and large transactions in the common stock and income bonds of the United Railways & Electric Co. has been the feature of the Baltimore stock market during the past week. The stock advanced five points and the incomes six points. The 4 per cent. bonds also rose, but in a less degree, the rise in them being only fractional. Current reports were to the effect that Philadelphia and New York capitalists were buying up these securities preparatory to undertaking a consolidation of the various public-service companies in Baltimore, but no confirmation of such rumors could be obtained. Toward the close of the week there was a recession from the highest prices. Cotton Duck issues were moderately traded in, with some little advance in the common stock, although the advantage gained was afterwards lost. Seaboards, G. B. S. Breweries and Consolidated Gas were comparatively quiet, yet the dealings in them were not so very small. Trust and other company stocks were active, and some gains were made by several issues. Some of the industrials advanced, and investment securities, while quiet as compared with those of a speculative character, were firmly held, with a fair amount of business.

In the dealings United Railways common rose from 10 3/4 to 15 1/4, reacting to 13 3/4, then advancing to 13 3/4, with last sale at 13 1/2; the preferred sold at 27; the incomes went from 50 to 56, reacting to 52 3/4; the 4s from 93 1/4 to 93 3/4, reacting to the opening; United Light & Power preferred was traded in at 47, and the 4 1/2s from 93 1/2 to 93 3/4; Consolidated Gas rose from 84 to 86, holding most of the gain, while the 6s sold at 111 1/2 and 112, and the 5s at 117 1/2; Seaboard common went from 18 1/2 to 19 1/4, reacting to 18 1/2; the preferred from 38 3/4 to 39 3/4, reacting to the start; the 4 per cent. sold from 84 to 85 1/2, reacting to 85; the 10-year 5s at 103 1/2 to 103 3/4, the 3-year 5s at 99 to 99 1/2; Cotton Duck common was dealt in from 8 1/2 to 10, reacting to the start; the incomes from 31 1/2 to 33, reacting to 30 3/4, with last sale at 31; the 5 per cent. at from 77 to 77 3/4, reacting to 75; United States Cotton Duck stock sold at 11; G. B. S. Brewing common advanced from 8 to 10 1/4, reacting to 9; the incomes went from 27 1/2 to 28 1/2, reacting to 27 3/4; the 1sts advanced from 55 1/2 to 57 1/2, reacting to 57.

Bank stocks sold as follows: Citizens', 29; Bank of Baltimore, 120; Marine, 37 1/2; Farmers and Merchants', 57; Merchants', 169 and 170; Union, 120. Trust and other company stocks sold as follows: American Bonding, 37 1/2 to 40; Fidelity & Deposit, 155 to 160, reacting to 157; Maryland Casualty, 57 to 61; United States Fidelity & Guaranty, 129 1/2 to 137, reacting to 135; Union Trust, 53 1/4 to 54 1/2; International Trust, 132 to 137; Mercantile Trust, 158 1/2 to 162 1/2; Baltimore Trust, 310; Continental Trust, 155 to 163; Colonial Trust, 31 to 32; Central Trust, 57.

Other securities traded in were as follows: Atlantic Coast Line common, 155 down to 152 1/4, reacting to 153; do. Consolidated 4s, 99 3/4 to 99 1/2; do. new 4s certificates, 91 and 91 1/2; Atlantic Coast Line of Connecticut, 315 to 320, and back to 310; do. do. 4s certificates, 95; Northern Central stock, 107 1/2 to 109 1/2, and back to 107 1/2; Alabama Consolidated Coal & Iron common, 32 1/2 to 35 1/2; do. preferred, 81 1/4 to 85; do. 5s, 84 to 85; Georgia Southern & Florida 2d preferred,

70; Wilmington & Weldon 5s, 119 1/2; Kansas City Railway & Light 5s, 98 3/4; Maryland Telephone 5s, 93 1/2 to 95; International Mercantile Marine common, 141 1/2; do. preferred, 20 3/4 and 30; Baltimore Brick common, 9 to 9 1/2; Coal & Iron Railway 5s, 108; Maryland & Pennsylvania 4s, 94 1/4 to 94 3/4; Norfolk Railway & Light 5s, 91; Virginia Midland 5th, 115 1/4; Anacostia & Potomac 5s, 105 1/2 to 105 3/4; Lake Roland Elevated 5s, 119; Virginia Railway & Electrical Development 5s, 98 1/2; German Fire Insurance, 15; Augusta Street Railway 5s, 104; Knoxville Traction 5s, 106; Charleston Consolidated Electric 5s, 92 1/2 to 93 1/4; Norfolk Railway & Light stock, 11 to 11 1/4; Georgia Southern & Florida 1st preferred, 100; North Carolina 4s, 104 to 103 3/4; American Ice common, 7 1/2; Macon Railway & Light 5s, 95; City & Suburban 5s, 112 3/4; Georgia & Alabama Consolidated 5s, 112 1/2; City & Suburban (Washington) 5s, 107 1/2 to 107; Consolidation Coal, 68 1/4; Pittsburgh & Allegheny Telephone 5s, 80; Atlantic Coast Line of South Carolina 4s, 103 3/4; North Baltimore 5s, 119; Baltimore City (1930) 3 1/2s, 110 1/2; Canton Company, 90; Norfolk & Carolina 1st 5s, 116 3/4.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended
December 7, 1904.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	152	153 1/4
Atlantic Coast Line Pref.....	100	118	119
Atlantic Coast Line of Conn.....	100	395	310
Georgia Sou. & Fla. 1st Pref.....	100	99	100
Georgia Sou. & Fla. 2d Pref.....	100	69	75
Macon Railway & Light.....	100	25	28
Norfolk Railway & Light.....	100	25	11 1/4
Seaboard Railway Common.....	100	18	18 1/2
Seaboard Railway Preferred.....	100	37 3/4	39
United Railways & Elec. Co.....	50	13 1/2	13 3/4

Bank Stocks.	Par.	Bid.	Asked.
Citizens' National Bank.....	10	29	30
Drovers & Mech. Nat. Bank.....	100	40	41 1/2
Farmers & Mer. Nat. Bank.....	40	57	59
German Bank.....	100	102 1/2	103
Merchants' National Bank.....	100	120	122
National Bank of Baltimore.....	100	120	122
National Howard Bank.....	10	11	11
National Marine Bank.....	30	36	37 1/4
National Mechanics' Bank.....	10	27	28 1/2
National Union Bank of Md.....	100	120	120 1/2

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
American Bonding & Trust.....	50	41	41
Baltimore Trust & Guaranty.....	100	295	310
Central Real Estate & Trust.....	50	56	57 1/2
Colonial Trust.....	50	31 1/2	32
Continental Trust.....	100	160	164
Fidelity & Deposit.....	50	159	160
International Trust.....	100	134	136
Maryland Casualty.....	25	60 1/2	61 1/4
Mercantile Trust & Deposit.....	50	161	161
Union Trust.....	50	54 1/2	55
U. S. Fidelity & Guaranty.....	100	134	136

Miscellaneous Stocks.	Par.	Bid.	Asked.
Alabama Coal & Iron.....	100	32 1/2	35
Ala. Coal & Iron Pref.....	100	84	85
Consolidated Gas.....	100	85 1/2	87
Consolidation Coal.....	100	68	68 1/2
Cotton Duck Voting Trust.....	100	8	8 1/2
G. B. & S. Brewing Co.....	100	9	9 1/2
George's Creek Coal.....	100	83	83
International Mer. Marine.....	100	14	14
Internatl. Mer. Marine Pref.....	100	29	30
Mer. & Miners' Trans. Co.....	100	170	174
United Elec. L. & P. Pref.....	50	47 1/2	50
U. S. Cotton Duck Common.....	100	9	12

Railroad Bonds.	Par.	Bid.	Asked.
Albany & Northern 5s, 1916.....	94 1/2	94 1/2	94 1/2
Atlanta & Charlotte 1st 7s, 1907.....	100 1/2	100 1/2	100 1/2
Atlan. Coast Line 1st Con. 4s, 1882.....	99 1/4	99 1/4	99 1/4
Atlantic Coast Line 4s, Cfs., 1952.....	91	92	92
Atlantic Coast Line (Conn.) 5s.....	119	119	119
Atlantic Coast Line (S. C.) 4s.....	95	96	96
Brunswick & Western 4s.....	98	98 1/2	98 1/2
Carolina Central 4s, 1918.....	98	98 1/2	98 1/2
Coal & Iron Railway 5s, 1929.....	108	108	108
Columbia & Greenville 1st 6s, 1916.....	117 1/4	117 1/4	117 1/4
Florida Southern 4s, 1940.....	109 1/2	109 1/2	109 1/2
Georgia & Ala. Terminal 5s, 1948.....	112 1/2	112 1/2	112 1/2
Georgia, Car. & North 1st 5s, 1929.....	112	113 1/4	113 1/4
Maryland & Pennsylvania 4s, 1951.....	94 1/4	94 1/4	94 1/4
Norfolk & Carolina 4s, 1950.....	85	85 1/4	85 1/4
Seaboard Air Line 5s, 10-year, 1911.....	103 1/4	103 1/4	103 1/4
Seaboard Air Line 5s, 3-year.....	99	99 1/4	99 1/4
Seaboard & Roanoke 5s, 1926.....	112	112	112
Silver Sprgs., Ocala & Gulf 4s, 1918.....	112 1/2	112 1/2	112 1/2
South Bound 5s, 1941.....	112 1/2	112 1/2	112 1/2
Virginia Midland 4th 3-4-5s, 1921.....	112 1/2	112 1/2	112 1/2
Virginia Midland 5th 5s, 1926.....	115 1/2	115 1/2	115 1/2
West North Carolina Con. 6s, 1914.....	116 1/2	116 1/2	116 1/2
West Virginia Central 1st 6s, 1911.....	113	113	113
Wilmington & Wel. Gold 5s, 1935.....	113	113	113

Street Railway Bonds.	Par.	Bid.	Asked.
Anacostia & Potomac 5s, 1949.....	106 3/4	106	106
Augusta Rwy. & Elec. 5s, 1940.....	101	102 1/2	102 1/2
Baltimore Traction 1st 5s, 1929.....	112	112	112
Baltimore Traction Conv. 5s, 1906.....	100 1/2	100 1/2	100 1/2
Charleston Con. Electric 5s, 1909.....	92 1/2	93	93
City & Suburban 5s (Balt.), 1925.....	113	113	113
City & Suburban 5s (Wash.), 1948.....	103 1/2	103 1/2	103 1/2
Knoxville Traction 1st 5s, 1928.....	105	105 1/2	105 1/2
Lexington Railway 1st 5s, 1919.....	104	106	106
Macon Rwy. & Lt. 1st Con. 5s, 1953.....	94 1/2	95	95
Norfolk Railway & Light 5s.....	90 1/2	91	91
Norfolk Railway 5s, 1942.....	119 1/2	119 1/2	119 1/2
South Side Development 5s.....	90	90	90
United Railways 1st 4s, 1945.....	93	93 1/4	93 1/4
United Railways Inc. 4s, 1949.....	51 1/2	52	52
Virginia Rwy. & Elec. Dev. 5s.....	98	98	98

Miscellaneous Bonds.	Par.	Bid.	Asked.
Alabama Consol. Coal & Iron 5s.....	84 1/2	85	85
Consolidated Gas 6s, 1910.....	111 1/4	112 1/4	112 1/4

Consolidated Gas 5s, 1909.....	117 1/4	118	118
G. B. & S. Brewing 1st 3-4s.....	55 1/4	57	57
G. B. & S. Brewing 2d Income.....	27 1/2	28	28
Maryland Telephone 5s.....	94	95	95
Maryland Telephone Gen. Mtg. 5s.....	72	75	75
Mt. V. & Woodby Cot. Duck 5s.....	75	75 1/2	75 1/2
Mt. V. & Woodby Cot. Duck Inc. 30 1/2.....	30 1/2	31	31
United Elec. Light & Power 4 1/2s.....	93	93 1/2	93 1/2

SOUTHERN COTTON-MILL STOCKS

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending December 5.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	60	75
Aiken Mfg. Co. (S. C.).....	85	90
Anderson Cotton Mills (S. C.).....	115	115
Arkwright Mills (S. C.).....	106	106
Augusta Factory (Ga.).....	72	75
Belton Mills (S. C.).....	98 1/2	101
Bibb Mfg. Co. (Ga.).....	102	102 1/2
Buffalo Cotton Mills (S. C.) Pfd.....	93	96
Cabarrus Cotton Mills (N. C.).....	122 1/4	122 1/4
Chadwick Mfg. Co. (N. C.).....	102	102
Chiquola Mfg. Co. (S. C.).....	95	95
Clifton Mfg. Co. (S. C.).....	85	95
Clifton Mfg. Co. (S. C.) Pfd.....	105	105
Clinton Cotton Mills (S. C.).....	135	135
Columbus Mfg. Co. (Ga.).....	106	106
Courtenay Mfg. Co. (S. C.).....	79	79
Dallas Mfg. Co. (Ala.).....	85	90
Darlington Mfg. Co. (S. C.).....	85	90
Eagle & Phenix Mills (Ga.).....	106	106
Easley Cotton Mills (S. C.).....	101	101
Enoree Mfg. Co. (S. C.).....	85	85
Enoree Mfg. Co. (S. C.) Pfd.....	100	100
Enterprise Mfg. Co. (Ga.).....	80	80
Exposition Cotton Mills (Ga.).....	160	160
Gaffney Mfg. Co. (S. C.).....	59	59
Gainesville Cotton Mills (Ga.).....	50	50
Graniteville Mfg. Co. (S. C.).....	120	120
Greenwood Cotton Mills (S. C.).....	102	102
Grendel Mills (S. C.).....	100	100
Henrietta Mills (N. C.).....	196	196
King Mfg. Co. John P. (Ga.).....	58	58
Lancaster Cotton Mills (S. C.).....	110	110
Lancaster Cot. Mills (S. C.) Pfd.....	95	95
Langley Mfg. Co. (S. C.).....	92	98
Laurens Cotton Mills (S. C.).....	92	98
Limestone Mills (S. C.).....	94	94
Lockhart Mills (S. C.).....	94	94
Louise Mills (N. C.).....	98	98
Louise Mills (N. C.) Pfd.....	100	100
Mayo Mills (N. C.).....	100	100
Mills Mfg. Co. (S. C.) Pfd.....	95	95
Monarch Cotton Mills (S. C.).....	91	91
Monaghan Mills (S. C.).....	98	103
Newberry Cotton Mills (S. C.).....	120	120
Norris Cotton Mills (S. C.).....	106	106
Orangeburg Mfg. Co. (S. C.) Pfd.....	100	100
Orr Cotton Mills (S. C.).....	99 1/2	101
Pacolet Mfg. Co. (S. C.).....	100	101
Pacolet Mfg. Co. (S. C.) Pfd.....	100	104
Pelzer Mfg. Co. (S. C.).....	172	172
Piedmont Mfg. Co. (S. C.).....	179	179
Poe Mfg. Co., F. W. (S. C.).....	129	135
Raleigh Cotton Mills (N. C.).....	105	105
Saxon Mills (S. C.).....	100	105
Sibley Mfg. Co. (Ga.).....	60	62 1/4
Spartan Mills (S. C.).....	132	140
Trion Mfg. Co. (Ga.).....	130	140
Tupacula Mills (S. C.).....	145	145
Union Cotton Mills (S. C.).....	126	126
Union Cotton Mills (S. C.) Pfd.....	99	103
Victor Mfg. Co. (S. C.).....	115	125
Warren Mfg. Co. (S. C.).....	90	101
Warren Mfg. Co. (S. C.) Pfd.....	105	105
Washington Mills (Va.).....	20	20
Washington Mills (Va.) Pfd.....	95	95
Whitney Mfg. Co. (S. C.).....	104	104
Woodruff Cotton Mills (S. C.).....	97	100

New Corporations.

A fourth savings bank with \$50,000 capital is being organized at Wilmington, N. C.

A bank with \$10,000 capital has been organized at Cottage Grove, Henry county, Tennessee.

A new bank has been organized at Belleville, Ark., by J. Fagan, formerly assistant cashier of the German-American Bank of Stuttgart. Mr. Fagan will be cashier.

Articles of incorporation for the Powell County Deposit Bank of Stanton, Ky., capital \$15,000, have been filed by J. W. Williams, J. H. Hardwick and J. E. Lemming.

The Farmers and Merchants' Bank of Madison, Mo., has been chartered with \$10,000 capital. The incorporators are P. H. Bassett, W. P. Ash, Frank Ash and others.

The officers of the Bokchito National Bank, recently organized at Bokchito, I. T., are S. T. Bently, president; Atwood Risner, vice-president; Mr. Mardell of Texas, cashier.

The First National Bank of Cochrane, Ga., capital \$28,000, has been approved. The organizers are Z. V. Peacock, A. J. Thompson, C. E. Taylor, B. J. Wynne and S. B. Whipple.

The First National Bank of Jasper, Fla., capital \$30,000, has been approved. The organizers are W. Y. Bandlin, P. D. Sandlin, W. H. Greene, C. D. Blackwell and H. deG. Stewart.

The First National Bank of Bells, Texas, capital \$25,000, has been approved. The organizers are S. D. Simpson, Bells, Texas; H. W. Witcher, W. B. Blanton,

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